

Calendar

[Have a safe day!](#)

Tuesday, Feb. 16

1:30 - 4 p.m.

LHC Physics Center lecture - One West

Speaker: Dan Green, Fermilab

Title: The Higgs Boson

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd floor X-over

4 p.m.

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

Speaker: Gabriele Bassi, University of Liverpool and Cockcroft Institute

Title: Monte Carlo Mean Field Treatment of Coherent Synchrotron Radiation Effects with Application to Microbunching Instability in Bunch Compressors

Wednesday, Feb. 17
3:30 p.m.
DIRECTOR'S COFFEE
BREAK - 2nd Flr X-Over
THERE WILL BE NO FERMILAB COLLOQUIUM THIS WEEK

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

[Upcoming conferences](#)

[Campaigns](#)

[Take Five](#)

[Tune IT Up](#)

[H1N1 Flu](#)

Feature

Fermilab physicists honored for uniting fields of physics and cosmology



[Rocky Kolb and Michael Turner](#)

Three decades ago, no one had ever heard of particle astrophysics. How could the tiniest pieces of matter and the biggest objects in the universe coexist in a single field of science?

Last month, the American Institute of Physics and the American Astronomical Society honored two scientists who, more than any others, made particle astrophysics, if not a household name, a new scientific discipline.

Theoretical astrophysicists Michael Turner and Rocky Kolb won the annual Dannie Heineman Prize for Astrophysics “for their joint fundamental contributions to cosmology and their development of the field of particle astrophysics, which have resulted in a vibrant community effort to understand the early universe.”

Turner and Kolb conducted much of their pioneering work at Fermilab. They were the first members of the NASA/Fermilab Theoretical Astrophysics Group, which blossomed into the realm of experiment and observation and continues today at the Fermilab Center for Particle Astrophysics. In the process, they entertained generations in the Fermilab community with a new genre of cosmic humor, astroparticle shtick.

Former Fermilab Director Leon Lederman and the late David Schramm of the University of Chicago brought the two together in 1983. John Peoples, who followed Lederman as lab director, helped them realize their plan of

Director's Corner

National Engineers Week

This week, starting on Valentine's Day and ending next Friday, we celebrate National Engineers Week. Here at Fermilab a series of activities, including [lectures and tours](#) of facilities opened to the Fermilab community, will honor and celebrate engineering. At Fermilab

we have more than 200 engineers who transform physicists' dreams into functioning equipment in multiple accelerators and detectors. They design and improve the supporting infrastructure, and help in diagnosing and repairing equipment during operations. Fermilab has an unmatched record in operating accelerators and detectors efficiently and safely, especially considering that ours are probably the most complex in the world. This performance is a testament to the superb engineering skills of our staff.

This week will be the 20th celebration of National Engineers Week promoted by the [foundation](#) of the same name. During the week there will be many outreach activities to highlight the engineering profession and to introduce young people and the public to the wonders that engineering brings to the world. From the most dramatic large structures to the smallest structures in molecular engineering, engineers apply a combination of imagination and rigorous analytical skills to build all the things that have become essential to the economy and our well-being. However the profession is largely hidden in K-12 education, since unlike physics, chemistry or biology, “engineering” generally does not appear in the curriculum. The outreach that engineers perform, especially during Engineers Week but also throughout the year, is an essential service to the profession and the nation. There is hope that the situation is changing. Yesterday the [New York Times](#) reported on the newest Barbie Doll: an engineer!

Last week in Ramsey auditorium I had the opportunity to review our future program and



[Pier Oddone](#)

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

Weather

 Chance of snow
29°/19°

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

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

Tuesday, Feb. 17

- Breakfast: Bagel sandwich
- Creamy turkey vegetable soup
- Chili dog
- Country-fried steak
- Chicken cacciatore
- Italian panini w/ provolone
- Assorted sliced pizza
- Super burrito

[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

expanding into particle astrophysics experiments.

Turner said, "While the two of us are getting the prize, really Fermilab and the University of Chicago deserve a lot of credit for all the support they've given us and for taking chances." Not to mention auditioning their act.

For more than 25 years, the two each held joint appointments at Fermilab and the University of Chicago. Now both are professors full-time at the University of Chicago.

[Read more](#)

-- *Kathryn Grim*

In Brief

New E-Verify rule may mean staff will contact you

As of Jan. 29, a new federal regulation requires that Fermi Research Alliance, LLC., use the E-Verify system as part of its contract with the Department of Energy.

E-Verify is an electronic system operated by the Department of Homeland Security that enables employers to verify identity and work authorization.

This change to the contract requires Fermilab to review I-9 forms of all current employees who were hired between Nov. 7, 1986, and June 6, 2009. Records for employees hired on or before Nov. 6, 1986, will not need to be reviewed. Employees hired on or after June 6, 2009, are already entered into the E-Verify system.

To minimize inconvenience to employees, staff members from the International Services Office will review documents previously provided by affected employees and compare them to the new requirements. Based on other organizations' reported experiences, the International Services Office should be able to submit the required data for most affected employees through the E-Verify system using previously supplied documents and information. In some cases, though, International Services staff will need to contact employees for up-to-date information or documents.

Further details about this E-Verify project will be published soon. Check *Fermilab Today* for updates.

discuss its ramifications with our engineers. It was a lively session with many questions. Some aspects of engineering at Fermilab are changing in important ways. In the past, much of the equipment, especially when it came to accelerators, was designed and built within the laboratory. As we move to a world of large collaborations in accelerators, engineering at Fermilab will have the challenge to integrate and manage the interfaces of many systems built at other laboratories and universities and in industry both in the U.S. and abroad. We have a lot of experience performing this role for detectors such as CDF, DZero or Pierre Auger. We also have had critical roles in the design and development of CMS, even though the integrating functions remained with CERN. Now we have to do the same with accelerators like Project X. We have a very good start in these collaborative arrangements with the development of superconducting technology, where we have some 19 MOUs with collaborating institutions. Having coherent standards throughout the laboratory for how we design and document systems and how we communicate with our many partners will be essential.

Accelerator Update

Feb. 12-18

- Four stores provided ~32.5 hours of luminosity
 - Store 7603 quenched
 - Linac personnel repaired several devices
 - Store 7606 aborted
 - Booster had TCLK problems
 - MTA to take some beam today
- *The integrated luminosity for the period from 2/8/10 to 2/15/10 was 39.98 inverse picobarns. NuMI reported receiving 6.92E18 protons on target during this same time period.

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[CMS Result of the Month](#)[User University Profiles](#)[ILC NewsLine](#)**Info****Fermilab Today**

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www.fnal.gov/today/

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suggestions to:

today@fnal.gov

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[home page](#)[Unsubscribe](#) from *Fermilab**Today***From *symmetry breaking*****Do particle theorists have a blind spot?**

In a provocative section of a talk at the American Physical Society meeting in Washington, DC, yesterday, theorist Matthew Strassler from Rutgers University challenged particle theorists to not be too simple in their analyses. Most people would probably not claim that theoretical particle physics is too simple, but Strassler argued that nature is likely to be even more complicated than physicists expect. And if theorists only properly examine the simplest classes of models, where simple is a relative term, they might be led astray in interpreting future Large Hadron Collider data.

Physicists know that the Standard Model of particle physics is broken, but they don't yet know how to fix it. The general approach is to augment the Standard Model with new particles, forces, or phenomena and see what those extended theories predict. Then when experimenters gather more data, they will be able to see which theories might best reflect reality.

As is natural, theorists start by examining the models that are the simplest extensions of the Standard Model. Those simplest extensions usually have the word minimal in their name, such as the Minimal Super Symmetric Model or the Minimal Technicolor Model. "The preference for minimal models is unquestionably a cultural bias," Strassler claimed. He said that many theorists argue that minimal is elegant which appears well-motivated and is therefore appreciated. He said that that line of argument works in converse also, where non-minimal models are considered inelegant, not well motivated, and therefore are unappreciated.

[Read more](#)**In the News****Latest Announcements**[Fermilab Natural Areas Annual Meeting - Feb. 18](#)[Lunch & Learn About Back Pain - Feb. 18](#)[February Fermi Mac Users Group Meeting - Feb. 17](#)[Staff Appreciation Messages offered today](#)[Employee discount offered at Batavia Rosati's](#)[Hiring summer students for 2010](#)[Harlem Globetrotters special ticket price - April 15](#)[Fermilab Blood Drive today and Feb. 16](#)[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](#)[Engineers Week activities - Feb. 15-19](#)[Unleash those stomach butterflies - Toastmasters](#)[BLAST! The Movie: intro, film and Q&A - Feb. 19](#)[Ukrainian egg decorating class - Feb. 22](#)[Weight Watchers at Work begins new session](#)[Applications accepted for awards in URA Visiting Scholars program](#)[Blood drive sign-up](#)[Fermilab Family Open House - Feb. 21](#)[Ask HR sessions to be held at the](#)

Developing minds

From the ***Ottawa Citizen***, Feb. 12, 2010

There stood Neil Turok in front of a thin audience last week at the University of Ottawa. A free lecture from one of the world's great theoretical physicists, a guy who works with Stephen Hawking. Hawking would have drawn a crowd. Turok, on a Senators game night, didn't. I counted 90.

He talked physics, of course. He's a cosmologist, director of the Perimeter Institute for Theoretical Physics in Waterloo, Ont., and has been on staff at Fermilab, Cambridge University, and Princeton. If you want to get him talking, you can always ask this Big Bang expert his favourite question: What banged?

But then he talked about Africa and about education.

[Read more](#)

[Computing Division and Wilson Hall](#)

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

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

[Deadline for The University of Chicago Tuition Remission Program - March 5](#)

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

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

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

[FRA Scholarship 2010](#)

[Additional Activities](#)

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