

Calendar

Tuesday, November 9

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and

Technology Seminar - 1 West

Speaker: F. Le Pimpec, Stanford Linear

Accelerator Center

Title: Beam-Surface Interactions: A

Vacuum Point of View

Wednesday, November 10

11:00 a.m. Fermilab ILC R&D Meeting -

(NOTE LOCATION) Curia II

Speaker: V. Kuchler, Fermilab

Title: Fermilab ILC Site and Geological

Studies

Speaker: J. Jackson, Fermilab

Title: Fermilab ILC Outreach and

Communication Activities

12:00 p.m. Brown Bag Seminar II - 1

West

Speaker: S. Osman (Ethnic Hand

Drummer)

Title: Hand Drumming – Balance,

Creativity, Precision

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

Wilson Hall Cafe

Tuesday, November 9

Tomato Bisque

Pesto Marinated Chicken Breast \$4.75

Burgundy Beef Tips \$4.25

Baked Fish Creole over Rice \$3.75

Grilled Chicken Caesar Wrap \$4.75

Pepperoni Lover's Calzones \$3.25

Rio Grande Taco Salads \$4.75

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Fine-tune This



Witherell's prize for solving the riddle - A bottle of Sakonnet red from Landsberg's state of Rhode Island ([Click on image for larger version.](#))

Quick, what's 987654321 divided by 123456789?

The answer, 8.0000000729..., is not a whole number, but very close, by less than a tenth of a million.

At the Wine and Cheese seminar on Oct. 15, Greg Landsberg of Brown University promised a bottle of wine to anyone who could solve a riddle about this calculation by the end of the talk. The challenge, mind you, was not to find the result -- Landsberg gave that away -- but to explain why it was so weird.

Landsberg said he was trying to make a point about physics. There are numbers in nature that just happen to be "fine tuned" by freak accident: For instance, from earth, the sun and the moon look roughly as big as each other. But other balancing acts that look miraculous can instead be explained by deeper-running principles. Landsberg's formula, it turns out, is part of a general fact about the way

Director's Corner

Good Morning!

We are now five weeks into the 2005 fiscal year. What is the status of the funding legislation for Fermilab and High Energy Physics at the Department of Energy?



Mike Witherell

The President's budget request, submitted to Congress in early February, asked for \$747 million for High Energy Physics at the DOE, an increase of 0.8% from FY 2004. The Fermilab budget is \$292 million in the FY 2005 request, up 2.2% from FY 2004. The document included language that the DOE "will begin engineering design of a new Major Item of Equipment, the BTeV experiment at Fermilab." This is the only new project included in the HEP budget.

In late June the House passed its version of the Energy and Water Appropriations bill, which recommended an additional \$16 million for HEP. The Senate did not pass an Energy and Water bill in its regular session, so we have been operating according to a continuing resolution. This is not so unusual. The DOE budget for FY 2004 was signed in December, 2003, and the FY 2003 budget was not signed until February, 2003.

The Senate will reconvene for one week starting November 16. They could pass

Weather



Mostly Sunny 54°/42°

[Extended Forecast](#)

[Weather at Fermilab](#)

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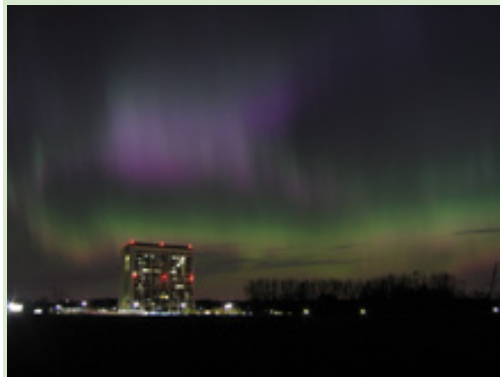
we represent numbers in a particular base, n . (Dividing the two numbers with digits running from $n-1$ to 1 and reverse, the answer approaches $n-2$. For the decimal representation used in Landsberg's example, n equals 10.)

Similarly, Landsberg said, some of the constants of physics that seem anomalous could one day find their explanation in the big picture. One example is the so-called hierarchy problem: Three of the four fundamental forces of nature have comparable strengths, when contrasted to the fourth, the much weaker force of gravity.

In the event, Fermilab director Mike Witherell solved Landsberg's mathematical quiz in time to claim the prize: A bottle of Sakonnet red from Landsberg's (and Brown's) state of Rhode Island.

Photo of the Day

Aurora Borealis Lights Up Fermilab's Sky



an Energy and Water Appropriations bill at that time, but if that does not happen they will pass another continuing resolution.

Correction

Yesterday's issue of *Fermilab Today* stated that the eight people who received certificates of appreciation from Director Mike Witherell were nominated by the Education Office. Nominations were actually made by Fermilab employees and users. Sten Hansen, who received the Director's Award for Contributions to Pre-College Education was actually nominated by a user from the University of Rochester. *Fermilab Today* regrets the error.

Accelerator Update

October 29 - November 4

Tevatron: Shimming 412 Dipoles - 100% complete

Linac: Up and Running

Booster: Up and Running

Antiproton Source: Technicians expect to begin closing up the Prevault and Pretarget areas the week beginning 11/8/04.

MI/Recycler: MI-30 & 62 correction magnet replacement is approximately 95% complete.

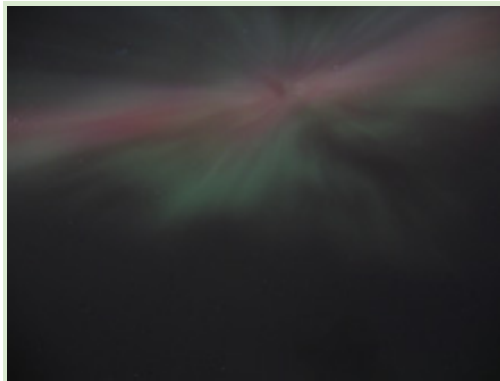
MiniBooNE: They are waiting on parts, but they expect to be ready by November 30th.

NuMI: They have successfully tested their horn.

[Read the Current Accelerator Update](#)

[View the Tevatron Luminosity Charts](#)

Announcements



The aurora borealis, photographed between 10:00 p.m. and 1:00 a.m. on Sunday night/Monday morning at Fermilab. (Photos courtesy of Marty Murphy) (Click on images for larger version.)

In the News

From *The Daily Herald*, November 7, 2004

Scouts, meet Fermilab

By David Sharos

No, the engineers aren't getting younger these days, but Fermilab employees do hope to spark and nurture interest in engineering for Girl Scouts with a new Fermilab badge.

About 200 Girl Scouts from area councils came to the nationally recognized Fermilab in Batavia Saturday to meet with scientists and engineers, and to explore the prairie trails and view a video on Fermilab's Prairie Restoration Project.

[Read more](#)

Clarification

In *Fermilab Today* for Friday, Nov. 5, the story "Why was my computer blocked from the network?" included a photo of Wyatt Merritt, Michael Diesburg and Amber Boehnlein with computers at FCC, to represent generally the scope of computing at Fermilab. The three people pictured are not responsible for computing security, they do not block other computer users from the network, and *Fermilab Today* regrets any misinterpretation caused by the photo.

Holiday Book Fair

Fermilab's Recreation Office will sponsor its "Holiday" Book Fair, hosted by Books are Fun, in the Atrium on Monday, November 29 from 10:00 AM until 6:00 PM and on Tuesday, November 30 from 7:00 AM until 3:00 PM. Books are Fun will be offering a new selection of hard cover books with savings of up to 70%. The Book Fair features in excess of 200 titles- Cookbooks, General Information Books, Inspirational Books, Children's Books, Bestsellers and more. They also offer a special section of photo albums, cards and gift items. The Book Fair will accept cash, personal check, MasterCard, Visa, American Express and Discover card. A portion of the proceeds from the Book Fair subsidizes some of Recreation Office's Programs.

Fermilab Barnstormers Meeting Wednesday

The Fermilab Barnstormers Model Aeronautic Club will have its next meeting Wednesday November 10 at 5:30pm at the Users' Center Music Room. Meetings are held on the second Wednesday of each month. Current members fly R/C gas planes, electric planes, control line

planes, and helicopters.

[more information](#)

Power Outage News

Wilson Hall

November 14 – The power will be off to Wilson Hall for ten hours on Sunday, beginning at 7 AM.

[Upcoming Activities](#)