

Calendar

Tuesday, June 27

12:00 p.m. Summer Lecture Series -

Curia II

Speaker: H. Prosper, Florida State University

Title: The Standard Model and Beyond

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-over

4:00 p.m. Accelerator Physics and

Technology Seminar - Auditorium (note location)

Speaker: R. Flora, Fermilab Title: LHC Quench Protection and Energy Extraction Systems

Wednesday, June 28

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

Curia II (note location) Speaker: V.

Kuchler, Fermilab

Title: Conventional Facilities and Siting Update

3:30 p.m. DIRECTOR'S COFFEE

BREAK 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium -

Auditorium (note location)

Speaker: C. Falco, University of Arizona

Title: The Science of Optics; The History of Art

Announcement: Heartland Blood

Centers will be here for the Fermilab

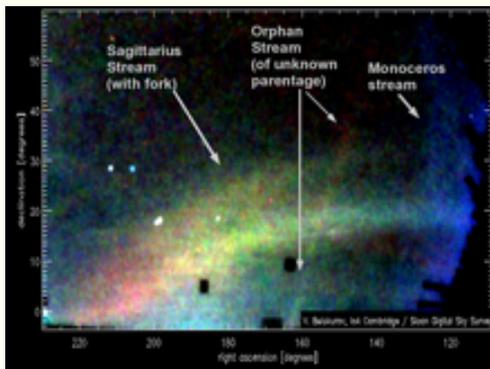
Blood Drive on June 27 and 28, from

8:00 a.m to 2:00 p.m. in the Wilson Hall Ground Floor NE Training Room.

Appointments can be scheduled on the [web](#) or by calling Diana at x3771.

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

Sloan says cosmic leftovers point finger at dark matter



The "Field of Streams" discovered by the Sloan Digital Sky Survey detector. The forked tail of the Sagittarius stream may be evidence that the halo of dark matter surrounding our galaxy is "flattened." (Click image for larger version.)

Leftovers from a cosmic meal may teach scientists about the shape and consistency of the dark matter thought to engulf the Milky Way galaxy. The Sloan Extension for Galactic Understanding and Exploration, part of the Sloan Digital Sky Survey, has found streams of stars left in the wake of smaller galaxies that were ripped apart and consumed by the tidal forces of the dark matter. "The dark matter is what's driving the motion of the stream out there, far away from the other stellar disks of the Milky Way," said astrophysicist Brian Yanny. Since 2000, SEGUE has found five streams in all.

Dark matter emits no light at any wavelength. The best way to get a handle on dark matter behavior, Yanny says, is through the effects of its gravity on visible matter. The stellar streams show the path the mini-galaxy took as it began its death spiral, a hundred thousand light years away from the

Director's Corner

The Beautiful Game



During this season it is hard not to comment on the World Cup, especially for one who grew up in Latin America playing soccer. At Fermilab, more than most places in the U.S., a large contingent of both our staff and our users are absorbed every four years by the fantastic international competition that the FIFA World Cup represents. Many of my friends and colleagues look a bit more bedraggled than normal--and I am no exception--as we try to keep up with the intense ups and downs of the Cup while carrying out our normal responsibilities. The World Cup is truly the world's party.

The many flags flying in front of Wilson

WeatherChance of Showers **79°/59°**[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secou Level 3](#)**Wilson Hall Cafe****Tuesday, June 27**

- Golden Broccoli & Cheese
- Cheesy Greek Squeeze
- Coconut Crusted Tilapia
- Spaghetti with Meatballs
- Toasted Almond Chicken Salad on Croissant
- Assorted Slice Pizza
- Chicken Fajitas

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, June 28****Lunch**

- Dominican Beef Salad
- Root Vegetable Vinaigrette
- Orange Cake with Sorbet

Thursday, June 29**Dinner**

- Peach and Brie Quesadillas w/Lime Honey Sauce
- Red Snapper Veracruz
- Jicama, Carrot, Green Bean Julienne
- Bourbon Walnut Tart w/Vanilla Ice Cream

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Search

galactic disk. "What's really nice about these stellar tails is that they trace out the orbit of the stars around the halo," Yanny said.

Astrophysicists hope to use the streams to tell the shape of the dark matter distribution, and possibly its lumpiness. The Sagittarius stream in particular may provide evidence that the orbit of an eaten galaxy "precessed" as it spiraled around, its orbit shifting slightly with each revolution like the design in a Spirograph. Its tail is forked, leading some scientists to speculate whether it is in fact two streams of stars ripped from the same galaxy, leaving a new stream of stars with every pass. The precessions of the galaxy's path could tell us whether we live in a flattened or spherical halo of dark matter. Knowing whether dark matter is spherical or flattened can show how galaxies, and the surrounding dark matter, might have formed in the early universe.

--*Jennifer Lauren Lee***Photo of the Day***Syphertron Collider at Fermilab*

Hall announce that Fermilab is an international institution. But one can sense it more deeply in the conversations about the World Cup and when the scores are the subject of sneak announcements during business meetings. Some would maintain that nothing is more serious than a World Cup score. For DZero, thirteen of their collaborating countries qualified for the World Cup, and five are still in the running to win it. The CDF collaboration is a close second to DZero with eight countries qualifying for the World Cup and only four surviving at this point. In almost every other scientific activity in the laboratory we touch other countries, and with all of them soccer is something that we can understand in common and share with enthusiasm as we build our scientific collaborations.

Accelerator Update**June 23 - 26**

- Three stores provided 58 hours and 55 minutes of luminosity
- A Pbar tuning program causes problems
- TeV suffered quench at sectors F2 and F3
- MTest begins taking beam
- Booster kicker problem
- H-Source tripped off

[Read the Current Accelerator Update](#)[Read the Early Bird Report](#)[View the Tevatron Luminosity Charts](#)**Announcements**

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US Particle Accelerator School director William Barletta sent an alternative illustration for [Friday's story](#), which described beam-energy in terms of jelly donuts. Here he shows two donuts colliding, sans jelly. With about 180 calories each, it would take more than 4 of these hollow glazed donuts to equal the beam-energy of the Tevatron. (Click image for larger version.)

In the News***The Daily Herald, June 25, 2006: Clash of the titans***

Amid the gentle sway of grasses in a Batavia prairie, the reign of a champion is coming to an end. The Tevatron particle accelerator — the muscle that pumped the blood of scientific discovery through the veins of Fermi National Accelerator Laboratory and the region's scientific community for 22 years — is about to become obsolete. But don't count the champ out yet. Last year, Fermilab officials cranked up the Tevatron for one last proton-smashing flourish before its European replacement steals the stage. They're hoping one of history's greatest scientific devices ends with a big bang and not a whimper.

[Read More](#)

In the News***Daily Herald, June 25, 2006: Disappearing gravitons, strings, theory of everything***

You know a lot, if you're Joe Lykken.

How the universe works, from the way gravity pulls the largest stars to the way gluons hold quarks together inside subatomic protons, you know it cold.

"It's basic mathematics," you tell graduate students attending a lecture you're giving at Fermilab, where you're on staff, among the top theorists in

Women's sports league at Fermilab

Fermilab resident Heather Hall is gathering information for all-women's sports, but she is unsure which sport women would be most interested in playing. Please send an email to Heather at heather.hall@ge.com (or leave a voicemail at x4915) listing your interest level and what sport you wish was available to you.

Chicago sight-seeing boat tour on July 6

See Chicago's architecture and historic landmarks by cruising down the Chicago River, and then out onto Lake Michigan to see the world-famous skyline. A bus (with air conditioning) will be leave from the Lederman Education Center at 9:45 am on July 6, and we will be back around 4:00 pm. Tour costs are \$18 for adults, \$8 for kids age 3 - 11, and children under 3 years are free. For further information and to register contact: Selitha Raja at (630) 305-7769, SelithaR@hotmail.com.

International Folk Dancing

International Folk Dancing will meet Thursday, June 29, in Ramsey Auditorium in Wilson Hall. Dancing begins at 7:30 p.m. with teaching earlier in the evening and request dancing later on. Newcomers are welcome and you do not need to come with a partner. On July 13, there will be a dance party with live music by accordionist Don Weeda. Information at 630-584-0825, 630-840-8194 or folkdance@fnal.gov.

[Upcoming Activities](#)

particle physics.

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