

Calendar

Wednesday, February 16

10:00 a.m. Special Accelerator Physics and Technology Seminar - Curia II

Speaker: W. Leemans, Lawrence Berkeley National Laboratory

Title: Advanced Techniques for Accelerating Particle Beams

11:00 a.m. Fermilab ILC R&D Meeting - 1 West

Speakers: J. Jackson and S. Mishra, Fermilab; H. Weerts, Michigan State University/Fermilab

Title: ILC Collaboration Tool

Speaker: S. Mishra, Fermilab

Title: Fermilab and ILC Meetings

2:00 p.m. Proton Driver General Meeting - 1 West

Speaker: H. Nguyen, Fermilab

Title: Kaons and Pions WG Report

Speaker: S. Holmes, Fermilab

Title: Implications of the President's FY'06 Budget for the Proton Driver Project

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium - 1 West

Speaker: W. Leemans, Lawrence

Berkeley National Laboratory

Title: Accelerating in the Future: Lasers Start to Produce Quality High Energy Electron Beams

Thursday, February 17

9:00 a.m. Computing Techniques

Seminar - FCC1W

Speaker: D. Pearson, Indiana University

Title: Grid Operations - Grid3 Experience and the iGOC

2:30 p.m. Theoretical Physics Seminar - Curia II

Witherell Addresses Budget To All Hands on Thursday

Director Michael Witherell will discuss "The Budget and Prospects for the Future" at three All-Hands meetings on Thursday in Ramsey Auditorium. The three sessions will be organized alphabetically by the last names of employees: A-G at 10 AM, H-O at 1 PM, and P-Z at 3 PM.

Fermilab Hosts Blood Drive In Wilson Hall Next Week



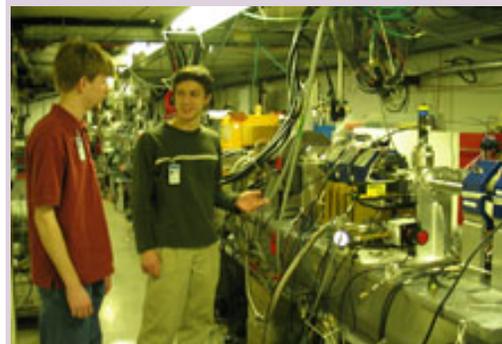
Fermilab's top blood donors prepare for next week's blood drive. From left, Hans Jostlein (51 pints), Phil Schlabach (51 pints), Elvin Harms (53 pints), Bill Gatfield (106 pints) and Ken Sievert (64 pints). (Click on image for larger version.)

Hematologists can separate blood into red blood cells, platelets and plasma, which means that donating one pint of your body's 10 pints of blood can help three people in need of blood transfusions. Fermilab is getting ready to host its tri-annual blood drive next Monday and Tuesday, February 21 and 22.

"In the past, we've found that prizes give people an incentive to donate," said Lori Limberg of Fermilab's ES&H, who has been in charge of the blood drives since

Universities Help On The ILC

This article is the sixth and last in a series that has focused on the benefits of Fermilab/University collaboration on different accelerator projects.



Michael Davidsaver (left) and Joe Calvey, both students at the University of Illinois, work on the AZero photoinjector. (Click on image for larger version.)

Building the proposed International Linear Collider will require innovations surpassing the proportions of every current accelerator. Key areas include superconducting RF cavities and beam focusing, and Northwestern University, the University of Wisconsin and the University of Illinois are among the major university groups working to meet the challenges at Fermilab.

To accelerate the beams, the ILC will require better superconducting RF cavities, which are fabricated with high purity niobium. NU's Materials Science Department, for example, is using a novel Local Electrode Atom-Probe (LEAP) microscope to study the chemical composition of the niobium. The LEAP decomposes a specimen atom-by-atom, at a rate of 70 million atoms per hour, yielding unprecedented insight into the material for SRF cavities. "Universities have different areas of expertise, and

Speaker: S. Moch, DESY, Zeuthen
Title: Deep-Inelastic Scattering in QCD –
At the Frontier of Perturbation Theory
3:30 p.m. DIRECTOR'S COFFEE
BREAK - 2nd Flr X-Over
THERE WILL BE NO ACCELERATOR
PHYSICS AND TECHNOLOGY
SEMINAR TODAY

Weather



Partly Cloudy **32°/17°**

[Extended Forecast](#)

[Weather at Fermilab](#)

Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Wednesday, February 16

Italian Wedding with Meatballs

Diner Style Patty Melt \$4.75

Mediterranean Style Baked Fish \$3.75

Beef & Broccoli \$3.75

Greek Chicken Panini with Feta Cheese
\$4.75

Sicilian Style Pizza \$2.75

Grilled Chicken Bowtie in a Tomato

Cream Sauce \$4.75

The Wilson Hall Cafe now accepts Visa,
Master Card, Discover and American
Express at Cash Register #1.

[Wilson Hall Cafe Menu](#)

[Chez Leon](#) will be closed through January
and February

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Info

2000. "This time, we've gotten prizes including a small crock pot, Angelie's restaurant gift certificate, CDs, T-shirts, Fermilab Art Series tickets and a heavy duty bag."

Fermilab's goal is 100 donors over the two days, for a total of 100 pints. Bill Gatfield of Fermilab's Technical Division has topped that number himself over the years, having given 106 pints. "It doesn't hurt a bit," he said. "Plus, you get free cookies." Added Hans Jostlein of PPD, who has donated 51 pints: "And it's a whole half hour that you don't have to work, all for a good cause."

You can either [sign up online](#) or call Lori Limberg at x6651 to reserve a place.

Walk-ins are also welcome at the NE Training Room on the ground floor of Wilson Hall, any time between 8:00 a.m. and 2:00 p.m. "We want to let people know that the Web-based registration form is much easier to fill out this year," said Bob Thomas of ES&H, who helps coordinate activities for the blood drive. "It's a smoother, quicker process, and we hope that change encourages more people."

In the News

From the Interactions News Wire, February 15, 2005 New Neutrino Telescope for South Pole

BERKELEY, CA -- Construction is now underway for a most unusual telescope, one whose light collecting "mirror" will be buried more than a mile beneath the South Pole ice cap. Dubbed IceCube, because its array of detectors covers a cubic kilometer of ice, this telescope is designed not to capture starlight, but to

their combined strengths help to confront problems with entirely new possibilities," said David Seidman, Materials Science and Engineering Professor at NU.

The University of Wisconsin is also doing research on applied superconductivity and defect problems in niobium. "This is very exciting for the people involved in the collaboration," said David Larbalestier, Professor at UW who is collaborating with microscopist Peter Lee and theorist Alex Gurevich. "High energy physics has led the way in showing that big teams of people can work together across labs and across countries in a way that advances science at a world level."

Another challenge requires major advances in focusing beams while preserving their properties. "The beams are the size of hemoglobin molecules when they collide. That has never been done before anywhere," said George Gollin of the University of Illinois, who is working on a pulse compression kicker to extract beam from the damping ring, which cools and focuses bunches of electrons. "We're trying to reduce the size of the damping ring from 17 km. circumference - the size of the TESLA design's - to 6 km. circumference. Although the ILC detectors will also need better resolution, we have more confidence in them; the accelerators, on the other hand, are daunting - they're the scary thing."

Announcements

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study the high-energy variety of the ghostlike subatomic particles known as neutrinos.

Originating from the Milky Way and beyond, and traveling to Earth virtually unobstructed, high-energy neutrinos serve as windows back through time, and should provide new insight into questions about the nature of dark matter, the origin of cosmic rays, and other cosmic issues.

[read more](#)

Main Site Water Pressure Adjustments

FESS/Ops will be repeating the adjustment of Main Site Domestic Water Pressure to expected Warrenville levels for additional data collection on Wednesday, 2/15/05 from 10:00 AM to 2:00 PM. Please notify your Building manager or Work Central at x3434 of any water pressure related problems.

Hatha Yoga

Never tried Yoga or possibly interested in taking classes but want to try it first? There will be a free yoga demonstration on Thursday, February 17 at Noon in the 15th floor South crossover. You will need to register with the Recreation Office for this free class. The next session of Hatha Yoga Classes is February 24 - April 14. Class is held in the 15th floor South crossover from Noon - 1 PM on Thursdays. The cost is \$80.00 for this 8-week class. A yoga mat is required. Deadline to register is Friday, Feb. 18. Class is limited, so register today.

[more information](#)

Fermilab Association of Rocketry

The Fermilab Association of Rocketry is having its monthly club meeting on February 16, 2005 at 5:00 pm in the lower level of the village barn. There will be a winter rocket building session after the meeting. If you have something you want to build, bring it with you. Or just come, hang out and talk about rockets!

[more information](#)

International Folk Dancing

International Folk Dancing will continue to be held at the Geneva American Legion Post Thursday evenings at 7:30 p.m. through the end of February, and then dancing will resume at Kuhn Barn

beginning March 10. Info at 630-584-0825 or 630-840-8194 or folkdance@fnal.gov.

Brian Greene Book Signing in Naperville

On Tuesday, March 1, Brian Greene will present his latest title, "The Fabric of the Cosmos" at a special event at North Central College in Naperville. Fermilab's Scott Dodelson will moderate this free event, but reservations are required. Please call Anderson's Bookshop (630-355-2665) to make a reservation.

[more information](#)

[Upcoming Activities](#)