

Furlough Information

New furlough information, including an [up-to-date](#) Q&A section, appears on the [furlough Web pages](#) daily.

Calendar

Friday, Feb. 15

3:30 p.m.

DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

4 p.m.

[Joint Experimental-Theoretical](#)

[Physics Seminar](#) - One West

Speaker: M. Voutilainen,
University of Nebraska, Lincoln

Title: Inclusive Jet Production
at DZero

8 p.m.

[Fermilab International Film](#)

[Society](#) - Auditorium

Tickets: Adults \$5

Title: [Spellbound](#)

Monday, Feb. 18

2:30 p.m.

[Particle Astrophysics Seminar](#)

- Curia II

Speaker: O. Lahav, University
College London

Title: Neutrino Masses from
Cosmological Probes

3:30 p.m.

DIRECTOR'S COFFEE

BREAK -- 2nd Flr X-Over

4 p.m.

All Experimenters' Meeting --
Curia II

Special Topic: Correction of
the Tevatron Collision Optics

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

Weather

Snow 33°/25°



[Extended Forecast](#)

[Weather at Fermilab](#)

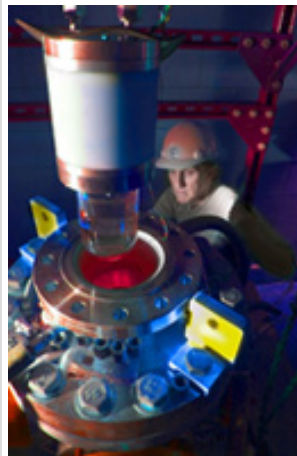
Statement of support for NIU community

To our NIU partners, friends:

We are shocked and deeply saddened by the shooting that occurred Thursday afternoon on the Northern Illinois University campus. Our thoughts are with the families, students, teachers and staff affected by this terrible tragedy. NIU is a long-standing laboratory partner. To our NIU colleagues, friends and neighbors, we extend our deepest condolences and offer our support.

Fermilab press release

COUPP experiment tightens limits on dark matter



Physicist Mike Crisler inspects the bubble chamber of the Chicagoland Observatory for Underground Particle Physics experiment.

Physics experiment tightened constraints on the "spin-dependent" properties of WIMPS, weakly interacting massive particles that are candidates for dark matter. Their results, combined with the findings of other dark matter searches, contradict the claims for the observation of such particles by the Dark Matter experiment (DAMA) in Italy and further restrict the hunting ground for physicists to track their dark matter quarry.

The COUPP experiment also proved that dusting off an old technology of particle physics, the bubble chamber, offers extraordinary potential as a tool in the search for dark matter.

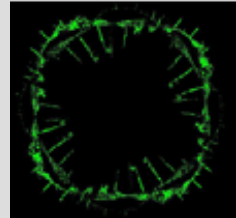
Physicists revive bubble chamber technology to search for WIMPs

Scientists working on the COUPP experiment at the Department of Energy's Fermi National Accelerator Laboratory today (February 14) announced a new development in the quest to observe dark matter. The Chicagoland Observatory for Underground Particle

From iSGTW

Grid computing opens new line of studies in fusion

Top: View of the TJ-II stellarator. The coils are shown in blue and yellow, the vacuum vessel in grey and the plasma in violet. A part of the vacuum vessel is removed in order that the plasma can be shown. Bottom: Example of 500 particle trajectories (green) in TJ-II. Images courtesy of TJ-II and EGEE



Things are heating up in the world of fusion as grid computing empowers an all-new approach to studying plasma behavior: simulations that extrapolate the individual trajectories of tens of millions of plasma particles.

Introduction: fusion in a magnetic nutshell

Magnetic confinement fusion is a promising energy source; however, its commercial exploitation requires an intricate understanding of the unusual properties of plasmas.

When matter is exposed to the very high temperatures required for commercial fusion—hundreds of millions of degrees—it enters a physical state with properties unlike any other: the plasma.

In the case of commercial fusion, the unusual properties of plasmas are further complicated by the presence of strong magnetic fields, which form protective magnetic "coils" around the plasma.

Understanding the way in which heat and particles propagate from the centre of this confinement device is crucial to plasma confinement and maintenance, and thus to progress towards commercial fusion.

[Read more](#)

-- Francisco Castejón, Coordinator of Fusion Activities in EGEE, Asocaión euratom/CIEMAT para Fusión

Current Security Status[Secon Level 3](#)**Wilson Hall Cafe****Friday, Feb. 15**

- Caldo de camaron
- Portabello mushroom melt
- Southern fried chicken
- Tuna casserole
- Eggplant parmesan panini
- Assorted pizza slices
- Assorted sub sandwich

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, Feb. 20
Lunch**

- Spicy meat turnovers
- Confetti salad
- Pineapple rum cake

**Thursday, Feb. 21
Dinner**

- Closed

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Archives[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[ILC NewsLine](#)**Info**

Fermilab Today is online at:
www.fnal.gov/today/

Send comments and suggestions to:
today@fnal.gov

"Our first results are extremely encouraging, and bubble-chamber technology is eminently scale-able," said Juan Collar, a University of Chicago professor and spokesman of the COUPP collaboration, which includes 16 scientists and students from the University of Chicago; Indiana University South Bend; and DOE's Fermilab. "We expect that COUPP will soon have a sweeping sensitivity to dark matter particles, simultaneously exploring both spin-dependent and spin-independent mechanisms for dark matter interaction. This is just one of the aspects that set our experiment apart from the competition."

[Read more](#)**Budget News Update****Orbach presents FY2009 budget request to HEPAP**

On Thursday, Feb. 14, DOE Under Secretary for Science Dr. Raymond L. Orbach presented on the FY2009 budget request to the High Energy Physics Advisory Panel. His presentation, "FY 2009 Budget Request for the Office of Science and Perspectives," is available [here](#).



Ray Orbach is the Under Secretary for Science at the U.S. Department of Energy

Interactions.org press release**SLAC Director Emeritus Awarded the 2007 AAAS Philip Hauge Abelson Prize**

From *SLAC*, Feb. 14, 2008

Professor Burton Richter has been named the winner of the 2007 Philip Hauge Abelson Prize by the American Association for the Advancement of Science (AAAS). The prize will be awarded to Richter by AAAS President David Baltimore and CEO Alan I. Leshner at the 174th AAAS Meeting in Boston, Massachusetts, on Saturday, Feb. 16, 2008.

Richter, a Nobel Laureate (Physics, 1976), is the Paul Pigott Professor in the Physical Sciences Emeritus at Stanford University, Senior Fellow at the University's Freeman Spogli Institute for International Studies, and Director Emeritus at the Stanford Linear Accelerator Center.

Announcements**[Have a safe day!](#)****DZero inclusive jet production result today at Wine & Cheese**

At 4 p.m. today, during a Wine and Cheese seminar, DZero collaborator and University of Nebraska scientist Mikko Voutilainen will present DZero's newest result on the inclusive production of jets. The result probes perturbative QCD predictions at more than 8 orders of magnitude using jet energy measurements with 1 percent precision. This result is the best measurement of the inclusive jet cross section to date, and it will have a significant impact both in parton models of the proton and on searches for new physics such as quark compositeness.

Employee art show - applications due Feb. 25

"Hidden Talents: Fermilab Employee Art Show" will be on display, March 19 - May 14, 2008. Intent applications are due Feb. 25, and forms are available in the Art Gallery on the stand near Curia II or on the [Web](#).

Sign up for Fermilab Blood Drive

Employees, users and summers students can now sign up for Fermilab's regular blood drive, taking place Tuesday, Feb. 19, and Wednesday, Feb. 20 in the Wilson Hall ground floor training room. Walk ins welcome. Call Diana at x3771 or Margie at x3411 or sign up [online](#).

Kyuki-Do class begins Feb. 25

Kyuki-Do, a martial art similar to Taekwondo, leads to a practical method of self-defense. It teaches balance, power and grace. Classes are held for six weeks on Monday and Wednesday from 5-6 p.m. at the Recreation Facility. You must register through the Recreation Office and have a Recreation Facility membership.

Folk Club barn dance Sunday

Fermilab Folk Club barn dance Sunday, Feb. 17, at 2 p.m. with music by Gena & Smith and calling by Lynn Garren. [More info](#)

Discounted tickets available

Discounted tickets are available for the following events: Chicago Bulls at the United Center, March 22, \$26 and March 25, \$30; Doodlebops Live at the Rosemont Theater, March 8; and "When Irish Cows Are Smiling" dinner and show at the Milk Pail, March 14, \$35.

The AAAS Philip Hauge Abelson Prize is awarded annually to either a public servant in recognition of sustained exceptional contributions to advancing science, or a scientist whose career has been distinguished for scientific achievement and other notable services to the scientific community. Richter will be awarded the prize “for his world-class contributions to research, his successful management of a leading scientific laboratory, and his unrelenting efforts to advance science and to promote its responsible use in shaping public policy.”

[View more](#)

Classifieds

New [classified ads](#) have been posted on *Fermilab Today*.

[Additional Activities](#)