

## Calendar

[Have a safe day!](#)

Thursday, July 16  
9 a.m. - 6 p.m.

[International Neutrino Summer School](#)

2 p.m.

[Computing Techniques Seminar](#) - FCC2A/2B

Speaker: Massimo Di Piero, DePaul University  
Title: Building Web Based Database Driven Applications and User Interfaces with web2py  
2:30 p.m.

[Theoretical Physics Seminar](#) - Curia II

Speaker: Raj Gandhi, Harish, Chandra Research Institute  
Title: Diffuse UHE Neutrino Fluxes and Physics Beyond the Standard Model  
3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over  
4 p.m.

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

West

Speaker: Toru Ogitsu, KEK/J-PARC

Title: Superconducting Magnet System for J-PARC Neutrino Beam Line

Friday, July 17

3:30 p.m.

DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over  
4 p.m.

[Joint Experimental-Theoretical Physics Seminar](#) - One West

(In conjunction with Neutrino Summer School)

Speaker: Yoichiro Suzuki, University of Tokyo

Title: An Ultimate Neutrino Detector - Multi-Megaton Water Cherenkov Detector

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

## University Profile

## University of California, Davis



Top left: University of California, Davis CMS group members Michael Case and Sho Maruyama in the Fermilab CMS Remote Operations Center; top right: Maruyama, Case and UC Davis CMS group member Carley Kopecky at the LPC at Fermilab; bottom: UC Davis CDF group members Will Johnson, Charles Cox, David Cox, Tom Schwarz and Andrew Ivanov.

NAME: [University of California, Davis](#)

HOME TOWN: Davis, California

MASCOT: Mustang

SCHOOL COLORS: Gold and blue

PARTICLE PHYSICS

COLLABORATIONS:

Present collaborations are CDF, CMS, FOCUS, DONUT, LUX, Double Chooz and LBDUSEL.

EXPERIMENTS AT FERMILAB: CDF, CMS, DZero, FOCUS, DONUT, LBDUSEL, E706, E653 and other earlier experiments.

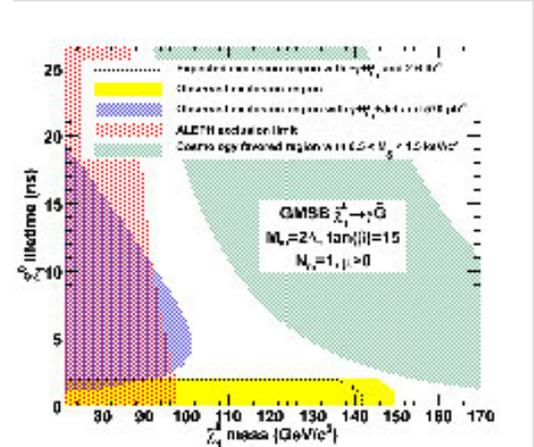
SCIENTISTS AND STUDENTS AT FERMILAB:

Nine faculty (including two active emeriti), three senior researchers, six postdocs and more than a dozen students take part in work at Fermilab. Many of them live on site.



## Fermilab Result of the Week

## Shedding light on dark matter



Physicists at CDF have searched for pairs of heavy supersymmetric particles called neutralinos, each of which would decay into a photon and a gravitino and could be responsible for the dark matter observed in the universe. While no evidence of these new particles turned up, new limits based on results from this search (yellow), and others (red and blue), are approaching the region favored in some cosmology models (green).

Many particle physicists and cosmologists hypothesize that the dark matter that fills the universe is made of heavy particles, produced in the earliest moments of the Big Bang and still here today. However, an important possibility, consistent with some cosmological models and observations, is that the dark matter particles were created a few billionths of a second after the Big Bang and aren't very massive at all.

These lighter particles are common in the theoretical model known as gauge-mediated supersymmetry breaking, or GMSB. If this model is true, then the Tevatron can produce supersymmetric particles, known as neutralinos, which live for less than a few billionths of a second before decaying into a photon and a gravitino. The properties of the photon can be measured directly, but the gravitino would pass through the detector without leaving any signal. Scientists can only infer that something was not detected in the event based on the missing energy. In the GMSB model, the gravitino is the particle responsible for the dark matter in the universe.

Since neutralinos would be created in pairs, physicists at the CDF experiment search for evidence of this theory using two-photon

information.

[Campaigns](#)

[Take Five](#)

[Tune IT Up](#)

[Weather](#)



Mostly sunny  
81°/56°

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

[Current Security Status](#)

[Secon Level 3](#)

[Wilson Hall Cafe](#)

Thursday, July 16  
 - Southwestern chicken tortilla  
 - Philly style cheese steak  
 - \*Garlic herb roasted pork  
 - Mardi Gras jambalaya  
 - \*Southwestern turkey wrap  
 - Assorted sliced pizza  
 - \*Marinated grilled chicken caesar salads

\*Carb restricted alternative

[Wilson Hall Cafe Menu](#)

[Chez Leon](#)

Thursday, July 16  
 Dinner  
 - Melon & prosciutto  
 - Herbes de Provence - crusted lamb chops  
 - Grilled new potatoes w/mint  
 - Steamed green beans  
 - Blueberry-blackberry shortcakes

Wednesday, July 22  
 Lunch  
 - Spinach & cheese stuffed portobello  
 - Mixed green salad  
 - Fresh fruit plate

[Chez Leon Menu](#)

COLLABORATING AT FERMILAB SINCE: 1971

MAJOR CONTRIBUTIONS TO FERMILAB EXPERIMENTS:  
 Founding member of U.S. CMS, contributing to Endcap Muons and Forward Pixels work. UC Davis is one of the largest U.S. university groups on CDF and has contributed to the CDF Run 2 silicon, XFT L2 trigger and top quark and tau lepton-related new particle searches. On DZero, the Davis group proposed the first tracking trigger, and designed and developed a front-end chip for it.

PARTICLE PHYSICS RESEARCH FOCUS:  
 Studying the top quark and looking for new particles and phenomena, including the Higgs boson, supersymmetric particles and neutrino CP violation at the highest-energy and intensity accelerators in the world.

WHAT SETS PARTICLE PHYSICS AT UNIVERSITY OF CALIFORNIA, DAVIS APART?  
 Our group has a rich history of particle physics research during the last 40 years. We have added a number of new faculty in the past decade and have a vibrant program spanning collider, neutrino and dark matter physics.

FUNDING AGENCY:  
 Department of Energy

FAVORITE NATIONAL LABORATORY:  
 Fermilab



View all [University profiles](#)

[Tune IT Up](#)

events.

They take advantage of the recent data from the Tevatron's high-luminosity run, as well as the CDF detector's new photon timing system. Also, in order to separate unusual events where gravitinos might have escaped detection, physicists have developed new techniques for separating events with real missing energy from events that mimic missing energy. The current data show no hints of these super events. This new search is the world's most sensitive for short-lived neutralinos in the GMSB model.

The figure shows the limits set by the combination of these results and results from other, recent searches for long-lived neutralinos. The combined exclusion region is rapidly approaching the energy region favored by cosmological models. Stay tuned, a discovery of dark matter may be just another billionth of a second away!

-- edited by Craig Group



The CDF scientists who worked on the GMSB search analysis from left to right: Sasha Pronko and Ray Culbertson, Fermilab; Dave Toback and Eunsin Lee, Texas A&M University; and Max Goncharov, MIT.

Photo of the Day

South Dakota students tour, learn about Fermilab



Call x3524 to make your reservation.

[Archives](#)

[Fermilab Today](#)

[Result of the Week](#)

[Safety Tip of the Week](#)

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[Fermilab Today](#)

is online at:

[www.fnal.gov/today/](http://www.fnal.gov/today/)

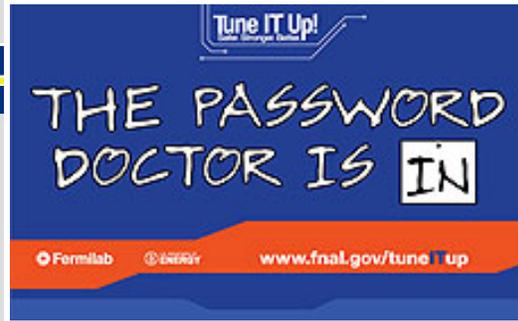
Send comments and suggestions to:

[today@fnal.gov](mailto:today@fnal.gov)

Visit the Fermilab

[home page](#)

## One password, less trouble



Passwords written on Post-it notes or other scraps of paper and stored in easy-to-find places present one of the most common computer security risks. This method has been the approach for employees who have a hard time remembering the passwords for the many applications they use.

To combat the problem of password proliferation, Fermilab's Computing Division has set up a services account – one account that will serve as the password for multiple applications, including:

- Fermilab Time & Labor Reporting
- Fermilab e-mail service
- Meeting Maker
- Fermilab Service Desk
- VPN
- Fermilab instant messaging

Some applications, including Exchange e-mail service and the Fermilab Service Desk, already support the use of the services account. You will also need this password to access the Tune IT Up Assessment.

You can activate your account through [www.fnal.gov/tuneitup](http://www.fnal.gov/tuneitup). Volunteers will offer help activating services accounts in the atrium today at lunch and periodically throughout the month.

[In the News](#)

Fermilab Deputy Director Young-Kee Kim welcomes a group of rising college freshmen from South Dakota on Tuesday. The students are spending four days at Fermilab touring facilities and learning about research programs at the laboratory, including plans to send a neutrino beam from Fermilab to the proposed Deep Underground Science and Engineering Laboratory, which would be located in their home state.

[Announcements](#)

### Latest Announcements

[Live music at International Folk Dancing, July 16](#)

[Change to Users' Office hours](#)

[Time to complete accomplishment reports](#)

[Bristol Renaissance Faire discount tickets](#)

[On-site housing-fall 2009/spring 2010](#)

[Six Flags Great America discount tickets](#)

[Pool memberships available in the Recreation Department](#)

[Raging Waves Waterpark online discount ticket program](#)

[Toastmaster meeting - July 23](#)

[Entry-level lectures on neutrino work - July 20](#)

[English Country Dancing, July 19](#)

[Argentine Tango classes through July 22](#)

[Intermediate/Advanced Python Programming July 22-24](#)

[Accelerated C++ Short Course begins August 6](#)

[Outlook 2007: New Features class August 6](#)

[The University of Chicago Tuition Remission Program August 17 deadline](#)

## FY 2010 House Appropriations Bill - DOE Office of Science

From *AIP FYI*, July 15, 2009

The House is now considering its version of the FY 2010 Energy and Water Development Appropriations Bill. Approved by the full House Appropriations Committee a week ago, the report accompanying the House bill, S. 1436, was just released. This report provides funding and policy recommendations for the Department of Energy's Office of Science.

The Senate Appropriations Committee has passed its version of this legislation and issued a committee report. Excerpts from this report regarding the Office of Science can be viewed here: ...

High Energy Physics:

The current budget is \$795.8 million.

The Administration requested \$819.0 million, an increase of 2.9 percent or \$23.3 million.

The Senate appropriations bill recommends \$813.0 million, an increase of 2.2 percent or \$17.2 million.

The House appropriations bill recommends \$819.0 million, the same as the budget request.

There were no policy or funding recommendations in the report language.

[Read more](#)

[Process piping \(ASME B31.3\) class offered in October](#)

[Additional Activities](#)

[Submit an announcement](#)