

Calendar

Wednesday, September 13

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

Speaker: N. Graf, Stanford Linear Accelerator Center

Title: ILC Detector Simulations: Status, Issues, Directions

2:30 p.m. Special Theory Seminar - WH3E

Speaker: Arvind Rajaraman (UC Irvine)
Title: SuperWIMP Dark Matter

3:30 p.m. Director's Coffee Break - 2nd floor crossover

THERE WILL BE NO FERMILAB COLLOQUIUM THIS WEEK

Thursday, September 14

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

Speaker: M. Piai, University of Washington

Title: Precision Electroweak Parameters from AdS-CFT

3:30 p.m. DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over

4:00 p.m. Accelerator Physics and Technology Seminar - 1 West

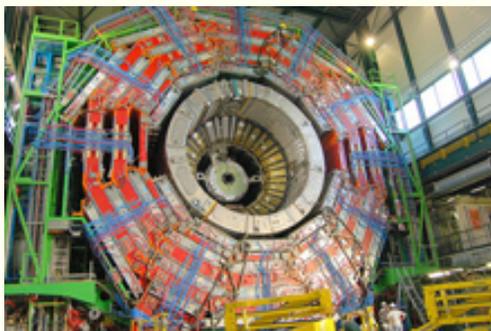
Speaker: W. Hartung, Michigan State University

Title: R&D in RF Superconductivity at Michigan State University

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

Weather

Fermilab contributions help CMS magnet reach full field



Fermilab scientists and collaborators of the US/CMS project have joined colleagues from around the world in announcing that the world's largest superconducting solenoid magnet has reached full field strength in tests at CERN, the European Particle Physics Laboratory.

Weighing in at more than 13,000 tons, the Compact Muon Solenoid experiment's magnet is built around a 20-foot-diameter, nearly 43-foot-long superconducting solenoid - a wire coil with multiple loops, which generates a magnetic field when electricity passes through it. The CMS solenoid generates a magnetic field of 4 Tesla, some 100,000 times stronger than the Earth's magnetic field, and stores 2.5 gigajoules of energy, enough to melt nearly 20 tons of gold. Superconductivity is achieved by chilling the coil to a temperature near absolute zero, where virtually all electrical resistance vanishes. Extremely high electrical current can then be used to generate a powerful magnetic field.

[Read Full Press Release](#)

Send in Director's Award nominations before Sept. 25

From the Particle Physics Division

Paths to understanding

In today's issue, Particle Physics Division Head Jim Strait discusses the importance of internationalism for physics, and for the world.



One of the most important and satisfying aspects of high energy physics - and of basic science in general - is how fully international it is. We are reminded of our global reach when we see flags from around the world flying in front of the High Rise, or who is eating in the cafeteria, or who has contributed to the Result of the Week in *Fermilab Today*. For us it is completely normal to collaborate closely with colleagues from other countries, from all parts of the globe; to go to their labs and work with them, or work with them when they come here; and to freely and openly exchange information with them.

This free flow of ideas and people is not



Scattered Showers 69°/51°

[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secon Level 3](#)**Wilson Hall Cafe****Wednesday, September 13**

- Vegetable Beef
- Fish & Chips
- Almond Crusted Sole
- Country Fried Steak w/Pepper Gravy
- Beef & Cheddar Panini w/Sauteed Onions
- Assorted Slice Pizza
- Cavatappi Pasta w/Italian Sausage & Tomato Ragù

[Wilson Hall Cafe Menu](#)**Chez Leon****Wednesday, September 13****Lunch**

- Lebanese Kabob w/Pita
- Baba Ghannuj
- Hummus
- Tabbouli
- Baklava

Thursday, September 14**Dinner**

- Puree Gloria
- Grilled Jumbo Shrimp
- Angel Hair Pasta Diavolo
- Sautéed Spinach w/Bacon
- Profiteroles

[Chez Leon Menu](#)

Call x4598 to make your reservation.

Search

Mike Albrow (left) won last year's \$1,000 Director's Award for his efforts with the World Year of Physics classroom visits.

Whether they are meeting with students and teachers to explain what Fermilab is all about, or designing, building and maintaining Lederman Science exhibits, volunteers are a major asset to the K-12 students and teachers in Fermilab's education programs. Now is the time to nominate a volunteer that you think has made the largest contribution to this effort.

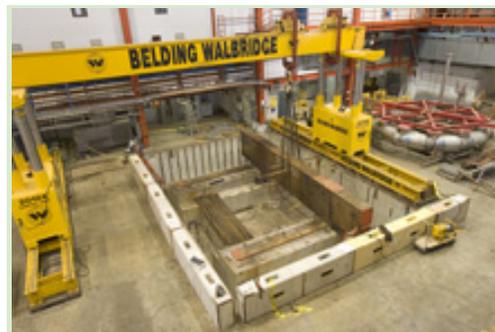
To submit a nomination, download a [nomination form](#) or pick one up from Nancy Lanning, WH15W. Forms must be received by Monday, September 25, to be considered for the 2006 award. Nominees must be a Fermilab staff member, user or contractor. Nominations will be held for two consecutive years.

From the nominations, a selection committee will chose a winner. Director Pier Odonne will present the winner with an award of \$1000, made possible by an anonymous donor, on Monday, October 16, at 5:00 p.m. on the second floor crossover.

In the News

only crucial for the advancement of our science, but also, in a small way, helps advance understanding among the diverse cultures of the world by giving ourselves and those around us small glimpses of how other people live and think. This was particularly true during the Cold War, when high energy physicists were among the few who traveled between the Soviet bloc and the West.

But it is also true and important now, when understanding between the US and much of the rest of the world is lacking. I hope that our international ways, and our values of openness and inclusiveness, can continue to flourish, and that they can help, at least a little, to defuse tensions in the world. So let's keep on traveling!

Photo of the Day

Bidding Farewell: Last Friday the final pieces of a 35-year resident of Fermilab, the [Chicago Cyclotron Magnet](#), were dismantled and taken away. John MacNerland, who has been at Fermilab 26 years, watched the proceedings from the Lattice Computing Center windows. "[When the magnet was in use] it was a wonderful thing and great people directed the experiments. But now we look for what is next. Time marches on and we move to bigger and better things."

Announcements

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ZeeNews.com, September 9, 2006: Giant machine set to probe secrets of the universe

Deep underground on the Franco-Swiss border someone will throw a switch next year to start one of the most ambitious experiments in history, probing the secrets of the universe and possibly finding new dimensions.

The Large Hadron Collider -- a 27-kilometre long circular particle accelerator -- at the Cern experimental facility near Geneva will smash protons into each other at unimaginable speeds trying to replicate in miniature the events of the big bang.

"These beams will have the kinetic energy of an aircraft carrier slammed into the size of a zero on a 20 pence piece," Brian Cox of Manchester University told the annual meeting of the British Association for the Advancement of Science.

[Read More](#)

Special Theory Seminar Today

Today at 2:30 p.m. Arvind Rajaraman of UC Irvine will give a talk titled "SuperWIMP Dark Matter" in the Theory Conference Room, WH3E. He will discuss a new model for dark matter in which the dark matter particles are produced from a decay of weakly interacting particles.

Tour and lecture at Waubonsee tonight

Waubonsee Community College offers a lecture at and tour of the new Waubonsee Science Building at the Sugar Grove campus tonight, September 13, from 7-9 p.m. Dr. Seth Stein of Northwestern University will talk about giant earthquakes. Refreshments will be served. Space is limited, so please call Community Education at 630-466-2360 to reserve a free ticket. [More information.](#)

[Upcoming Activities](#)