

## Calendar

**Fri., May 11**
**3:30 p.m.**

 DIRECTOR'S COFFEE  
 BREAK - 2nd Flr X-Over

**4:00 p.m.**

 Joint Experimental-Theoretical  
 Physics Seminar - Auditorium  
 (NOTE LOCATION)

 Speaker: J. Feng, University of  
 California, Irvine

 Title: Supersymmetric Dark  
 Matter

### Announcement

The Hunt for Dark Matter: A Symposium on Collider, Direct and Indirect Searches will be held at Fermilab from Thursday, May 10 through Saturday, May 12. [Click here](#) for more information.

**Mon., May 14**
**11:00 p.m.**

 Research Techniques Seminar  
 - Curia II

 Speaker: G. Giacomelli,  
 Bologna University/INFN

 Title: Magnetic Monopole  
 Searches

**2:30 p.m.**

 Particle Astrophysics Seminar  
 - Curia II

 Speaker: F. Donato, INFN /  
 University of Turin

 Title: New Physics in Cosmic  
 Rays

**3:30 p.m.**

 DIRECTOR'S COFFEE  
 BREAK - 2nd Flr X-Over

**4:00 p.m.**

 All Experimenters' Meeting -  
 Curia II

 Special Topic: Cryomodule  
 Assembly Facility (CAF) for  
 SRF R&D at Fermilab

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

## Weather

## Feature

### Summer school will nurture new neutrino scientists

As neutrino research at Fermilab progresses in the coming decades, attracting more physicists dedicated to the field is key.

This summer, from July 2-13, Fermilab and KEK will sponsor the Neutrino Physics Summer School, here at Fermilab. So far more than 50 international students have registered.

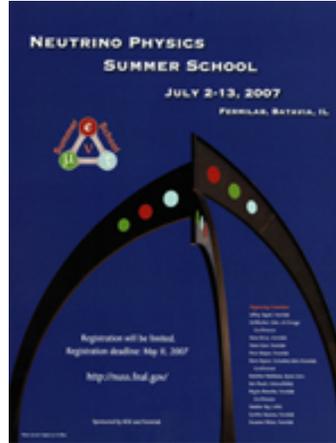
"We hope this meeting builds strong ties that will last throughout careers. Sometimes the people you meet at a summer school become friends and colleagues for life," said event co-organizer Gina Rameika of Fermilab's Neutrino Department.

The Neutrino Physics Summer School is aimed at senior graduate students and recent PhDs who study particle physics. Ten days of lectures and discussions are planned, lasting from 9 a.m. to 8 p.m. every day.

"After the lectures, the discussion sessions will have other physicists come in and explain the material further," Rameika said. "Some tough topics will be taught. We don't want people getting lost in the material early on, so we will guide them through it."

Organizers will keep the number of students small to encourage more personal interactions. Class topics range from the Standard Model to neutrino oscillations and decay, from both theoretical and experimental approaches.

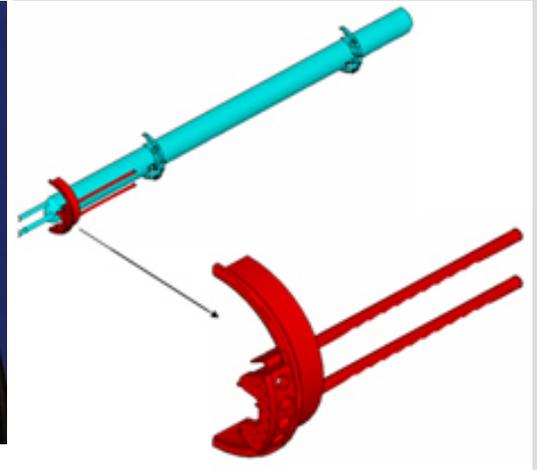
Tuition and room and board will cost about \$800, Rameika said, adding that it is hoped that a student's institution will cover the costs, however a small amount of scholarship funds will be available. Registration ends May 25,



Neutrino Physics Summer School poster

## Update

### Multilab team sets the stage for LHC inner triplet repairs



The cold mass of the Q1 magnet (blue) and two of the four cartridges (red) that get attached to the cold mass and the vacuum vessel surrounding the magnet (not shown) with brackets.

Scientists and engineers from CERN, Fermilab, Lawrence Berkeley National Laboratory and Japan's KEK Laboratory are preparing for repairs of 18 sets of structural supports to Fermilab-built quadrupole magnets for the LHC accelerator under construction at CERN. On Tuesday, March 27, the structural supports to one quadrupole magnet, part of an "inner triplet" of three magnets named Q1, Q2, Q3, failed a high-pressure test in the LHC tunnel. Fermilab assembled nine inner triplets for the LHC, including one spare. They are used to focus the proton beams of the particle collider before they enter the four interaction points along the ring.

To fix the structural supports' design flaw, the team of scientists and engineers has proposed to add to each Q1 magnet and each Q3 magnet a set of four cartridges that can absorb the longitudinal force generated during the pressure test. The solution was presented to a team of experts during a review at CERN on April 24 and 25. Since then the design of the cartridge system has been refined and parts needed for the cartridges and their installation have been ordered. Detailed tests of the design are in progress. The final design reviews will take place at Fermilab and CERN over the next couple of weeks.



Partly cloudy 75°/45°

[Extended Forecast](#)  
[Weather at Fermilab](#)[Current Security Status](#)[Secon Level 3](#)[Wilson Hall Cafe](#)**Friday, May 11**

- Cream of wild mushroom
- Blackened fish filet sandwich
- Southern fried chicken
- Tuna casserole
- Eggplant parmesan panini
- Assorted pizza slices
- Assorted sub sandwiches

[Wilson Hall Cafe Menu](#)[Chez Leon](#)**Thursday, May 10**  
**Dinner**

- Salad of field greens w/ jicama, radishes, oranges, pine nuts & queso rico w/ balsamic vinaigrette
- Beef short ribs in chipotle green chili sauce
- Cumin roasted sweet potatoes
- Strawberry sorbet w/ lemon sugar cookies

**Wednesday, May 16**  
**Lunch**

- Grilled flank steak
- Jasmine rice
- Pea pods & mushrooms
- Chocolate almond mousse

[Chez Leon Menu](#)

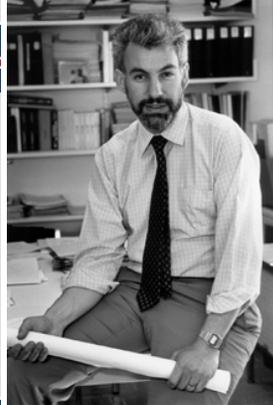
Call x4598 to make your reservation.

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

and about 20 seats remain.

-- *Kate Raiford***Feature**

## Bruce Winstein returns as Panofsky Prize winner



Bruce Winstein

Bruce Winstein, 2007 Panofsky Prize winner and Samuel Allison Distinguished Service Professor in Physics at the University of Chicago, is anticipating a reunion in addition to his talk on Wednesday, June 6 at the Users' Annual Meeting.

"It will be a way to reach old colleagues

I've lost touch with after I stopped doing so much experimental work at Fermilab," said Winstein, whose close Fermilab connection spanned more than 25 years from 1973 to 1999. A member of the National Academy of Sciences, Winstein had completed his undergraduate degree at UCLA and his PhD at Caltech.

Winstein's Panofsky Prize cites him for "leadership in the series of experiments that resulted in a multitude of precision measurements of properties of neutral K mesons, most notably the discovery of direct CP violation." He shared the Panofsky Prize with CERN's Heinrich Wahl and INFN's Italo Mannelli, who had worked on similar experiments. The researchers showed that weak forces directly violate CP symmetry. Winstein led the KTeV collaboration at Fermilab, which in 1999 announced the observation of direct CP (charge-parity) violation, critical in understanding the predominance of matter over antimatter in the formation of the universe.

Winstein then took a sabbatical at Princeton, where he evolved into a cosmologist. Returning to the University of Chicago, he initiated the National Science Foundation Center for Cosmological Physics. There, Winstein's current work on the cosmic microwave background radiation investigates the physical conditions in the early universe. He still thinks of himself as a particle physicist because: "particle physics and cosmology are overlapping more and more."

[Read more](#)**ILC Newsline**

## Software workshop reviews entire chain of data analysis



Group photo of the ILC Software Workshop, in front of LAL entrance

Even the best detector will be useless without clever reconstruction algorithms and software. On 2-4 May 2007, the ILC Software Workshop was held at LAL, Orsay (France). The whole chain of data processing was reviewed there: software framework and tools, algorithms and physics results. At the end of the workshop, DESY physicist Ties Behnke summarised that significant progress has been achieved over the past year and important performance milestones are close to being reached, even though the community is still small. Cambridge physicist Mark Thomson, finished his contribution declaring he was now convinced that Particle Flow Algorithm (PFA) can meet the ILC performance goals at 500 GeV and 1 TeV.

-- *Perrine Royole-Degieux*[Read more](#)**Announcements**

### Kyuki-Do Martial Arts Class

Classes will be held on Monday and Wednesday from 5:00 - 6:00 p.m. in the gymnasium of the Recreation Facility. The six-week session cost is \$45.00. The schedule for the next three sessions are: May 21 - July 2 (no class on Memorial Day, May 28), July 9 - August 15, and August 20 - September 26. For more information or to register contact the Recreation Office, x5427 or visit the [Recreation Website](#). Recreation Facility Membership required.

### June MS Project 2003 class

Learn to create and modify a project plan file

**Info**

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)

"My only regret is that he's no longer closely involved in the accelerator program at Fermilab," said Bob Tschirhart, Fermilab's ILC physics coordinator and associate head of the computer division. He worked with Winstein for more than 10 years. "He has high intellectual standards and is a continual source of new ideas. It's a powerful combination."

The Users' Meeting runs June 6-7. Users are encouraged to register. The complete program for the Users' Meeting is available [here](#).

-- *Kate Raiford*

**In the News**

### From *ScientificAmerican.com* May 9, 2007:

#### A Tale of Two Exoplanets: One Incredibly Hot, the Other Extremely Windy

*New studies of two exoplanets find that one keeps its hot side excruciatingly hot and the other may be stirred by 5,000 mph winds.*

New temperature measurements are revealing extreme behavior in two planets outside our solar system, called exoplanets. One study indicates that HD 149026 b—a relatively small but extremely dense planet orbiting a distant star—has an atmospheric temperature of 2,300 kelvins (about 3,700 degrees Fahrenheit), or twice that of the hottest previously studied planet.

Astronomers have also mapped the surface temperature of one of those next-to-hottest planets, the larger and less dense HD 189733 b. They conclude that winds are evening out its day and night temperatures by stirring together hot and cold gas.

[Read More](#)

that contains tasks, resources, and resource assignments with training in MS Project 2003. Classes are scheduled for June 20 and 27. [Learn more and enroll.](#)

**Hatha Yoga Class**

Learn the benefits of Yoga: distress, lower blood pressure, improve circulation and get clarity and piece of mind. Learn to restore and repair the body with relaxation poses and proper breathing. The next class will begin May 15 and run through July 10 (no class July 3) on Tuesdays from noon to 1 p.m. in the Auditorium WHGF. This cost for this eight-week class is \$80.00. The only thing you need to bring is a yoga mat and yourself. This class is open to men and women, beginner or advanced, good shape or bad, young or older. Register in the Recreation Office, by mail, M. S. 126 or if you are using a credit card you can register by phone, x5427. Registration forms can be found on the [web](#).

**NALWO's Spring Tea**

Join host Barbara Oddone for NALWO's Spring Tea on Monday, May 21, 2007 from 11:00 a.m. to 1:00 p.m. at her home, Site #29, located just inside the Wilson Street Gate. To attend the tea, turn right (south) at the driveway just east of the Wilson Street gate. Carpools are encouraged. Call the housing office if you are in need of a ride. Please bring a favorite dessert or appetizer from your country, but if you cannot bring a treat, please come anyway! For additional information contact Rose Moore at, 630/208-9309 or by [email](#), Selitha Raja at 630/305-7769 or by [email](#) or the Housing Office, 630/840-3777 or by [email](#).

**Classifieds**

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

**[Upcoming Activities](#)**