

Calendar

Wednesday, August 10

9:30 a.m. Special Seminar - 1 West

Speaker: M. Hanneman, Senior Counterintelligence Officer, Richland

Title: Terrorism 101: The Threat We Face

9:30 a.m. Fermilab ILC R&D Meeting - Curia II

Title: ILC Detector and Physics Groups' Plans for ALCPG Snowmass Workshop

11:00 a.m. Fermilab ILC R&D/Research Techniques Seminar - Curia II

Speaker: S. Worm, Rutherford Appleton Laboratory

Title: LCFI: Pixels for the ILC

3:30 p.m. Director's Coffee Break - 2nd Flr X-Over

4:00 p.m. Fermilab Colloquium - 1 West
Speaker: R. Mitchell, Jet Propulsion Laboratory

Title: The Cassini/Huygens Mission to Saturn

Thursday, August 11

2:00 p.m. LHC Physics Center Mini-Workshop - Sunrise Room (WH 11)

Speaker: Michelangelo Mangano

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

Speaker: M. Awramik, DESY Zeuthen
Title: Two Loop Electroweak Corrections to Standard Model Observables

3:30 p.m. Director's Coffee Break - 2nd Flr X-Over

Note: There will be no accelerator physics and technology seminar today

Weather

Education Office Teaches Physics to Local Students



High School Students learn about Cosmic Rays at Kuhn Barn. (Click on image for larger version.)

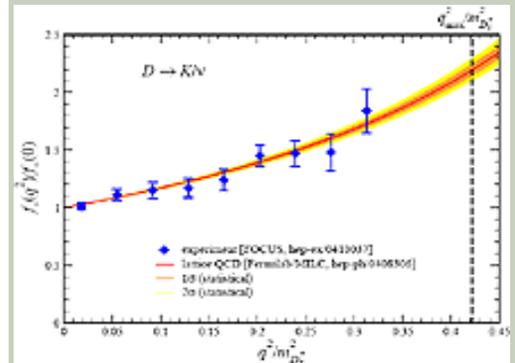
Fermilab's Education Office greets the new school year with another complete program of classroom presentations to celebrate the World Year of Physics, marking the 100th anniversary of Albert Einstein's "Miraculous Year."

"We reach many students throughout the area with our presentations each year," said Susan Dahl of Fermilab's Education Office, "but we're hoping to reach even more as a way of celebrating the year in which Einstein published the four papers that forever changed the way we view our world."

The age-appropriate World Year of Physics presentations, taught by Fermilab scientists and geared toward students from grades 2 through 12, are brought free of charge to classrooms, libraries and after-school programs, or to other informal science activities. From "Zap! Light and Color" (Grades 2-6) to "Space, Time and Einstein" (Grades 7-12), the presentations and presenters have made lasting impressions throughout Fermilab's surrounding school communities.

Theory Result

Lattice QCD Calculations Agree with Experiments



The curve shows the shape of the D -meson semileptonic form factor, as predicted by lattice QCD. (Click on image for larger version.)

One of the highlights of last month's Lepton-Photon conference in Uppsala, Sweden, was a challenge set by the CLEO-c experiment to those who believe they can carry out realistic quantum chromodynamics calculations. Last year, CLEO-c announced a measurement of the D meson's decay constant, abbreviated f_D . The data sample consisted of only eight events, however, leading to a rather large uncertainty of 20%. With further running, the plan was to increase the number of detected events and halve the uncertainty.

The D meson is a bound state of a charmed quark and an up antiquark. The decay constant is a basic property of any meson, and, in principle, it follows from the laws of quantum chromodynamics (QCD). In the idealization of a meson as a quark—antiquark pair, it is essentially the meson's wave function, evaluated at zero separation of quark and antiquark. A real



Chance Tstms 86°/67°

[Extended Forecast](#)

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Current Security Status

[Secou Level 3](#)

Wilson Hall Cafe

Wednesday, August 10

- Portabello Harvest Grain Soup
- Santa Fe Chicken Quesadilla \$4.85
- Garlic Herb Roasted Pork \$3.75
- Beef Stroganoff \$3.75
- Maryland Crab Salad \$4.75
- Meatlover's Pizza \$3.00
- Pesto Shrimp Linguini w/Leeks & Tomatoes \$4.85

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

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, August 10

Lunch

- Thai Beef & Vegetable Salad
- Banana Bourbon Cake w/Cream Anglais

Thursday, August 11

Dinner

- Skewered Shrimp w/Prociutto
- Steak an Poi vie w/Brandy Cream Sauce
- Vegetable of the Season
- Lemon Berry Napoleon

[Chez Leon Menu](#)

Call x4512 to make your reservation.

Search

"I was very pleased with Fermilab's World Year of Physics presentations," said Anne Barney of St. Peter's school in Geneva, Illinois. "The presenters were very knowledgeable, well-prepared, and entertaining. The presentations, perfectly geared toward the student's grade level, consisted of discussions, visual aids, and hands-on activities. The Fermilab WYoP presentations also introduced to the children a variety of careers in science."

[Read More](#)

—Mike Perricone

In the News

From *The AIP Bulletin of Science Policy News*, August 8, 2005

President Bush Signs Energy Policy Legislation; Director of the Office of Science elevated to Under Secretary for Science

President George Bush today signed H.R. 6, The Energy Policy Act of 2005. Among the provisions of this 1,725 page bill are provisions providing spending caps for the Department of Energy's Office of Science for Fiscal Years 2007, 2008 and 2009. The conference report, 109-190, elevates the position of the director of the Office of Science, and contains language regarding several physics programs (fusion, Spallation Neutron Source, and Rare Isotope Accelerator) within the Office of Science.

Passage by the House and Senate and President Bush's signature on this Act puts two branches of the federal government on record in support of dramatically higher funding for the Office

meson is more complicated: the quark and antiquark are bound by a swarm of gluons, and, if that is not enough, the gluons occasionally fluctuate into pairs of more quarks and antiquarks. It is, thus, not easy for theorists to calculate decay constants from QCD.

[Read more](#)

[Result of the Week Archive](#)



Fermilab theorists (from left to right) Jim Simone, Andreas Kronfeld, and Paul Mackenzie, in front of Fermilab's first PC cluster for lattice QCD. (Click on image for larger version.)



Claude Bernard of Washington University (St. Louis) and the MILC collaboration worked on the *D* decay calculations.



Masataka Okamoto, formerly of Fermilab's Theoretical Physics Department and now of KEK, worked on the *D* decay calculations.

Announcements

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of Science. Whether these authorization level are reflected in future appropriations bills is yet to be seen. It will be difficult in the current fiscal environment to provide this funding for the Office of Science, as evidenced by the significant differences in the budget for the National Science Foundation and the levels authorized in the National Science Foundation Authorization Act.

[Read More](#)

Wilson Hall Interior Window Washing

The cleaning crew will wash the interior windows on the 8th, 9th, 10th and 11th floors of Wilson Hall today. Contact Enixe Castro (x2798) with questions.

International Folk Dancing

International Folk Dancing will meet Thursday, Aug. 11, in Wilson Hall's Ramsey Auditorium. Dancing begins at 7:30 p.m. with teaching, followed by request dancing. Newcomers are welcome and you do not need to come with a partner. On Aug. 18, dancing is cancelled. Otherwise, international dancing will continue weekly in the Auditorium until mid-September, when it will return to Kuhn Barn. Info at 630-584-0825 or folkdance@fnal.gov.

Bowling League

Fermilab Wednesday night bowling league is currently looking for a few more bowlers—individuals or complete teams. Interested parties should contact Robert Hively (x4467) or Al Legan (x4074).

[More information](#)

Upcoming Activities