

Calendar

Thursday, June 1

9:00 a.m. [Users' Annual Meeting](#) -

Auditorium

12:45 p.m. Particle Astrophysics Seminar - WH-6W (NOTE DATE, TIME, LOCATION) Dark Side

Speaker: G. Farrar, New York University
Title: Strategies for Identifying the Source (s) of UHECRs

THERE WILL BE NO THEORETICAL PHYSICS SEMINAR THIS WEEK

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

Accelerator Physics and Technology Seminar - CANCELLED

Friday, June 2

9:00 a.m. GSA – Annual Fermilab

Student Conference – 1 West

[New Perspectives 2006](#)

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO JOINT EXPERIMENTAL THEORETICAL PHYSICS SEMINAR THIS WEEK

Saturday, June 3

9:00 a.m.

GSA – Annual Fermilab Student Conference – 1 West

[New Perspectives 2006](#)

For links to events, click [here](#).

Weather

EPP2010 Chair Harold Shapiro speaks at 8:45 a.m.

Don't miss Harold Shapiro, chair of the EPP2010 committee, when he gives the first talk of today's Users' Meeting in Ramsey Auditorium at 8:45 a.m.

Rep. Biggert's good news is a hit at Users' Meeting



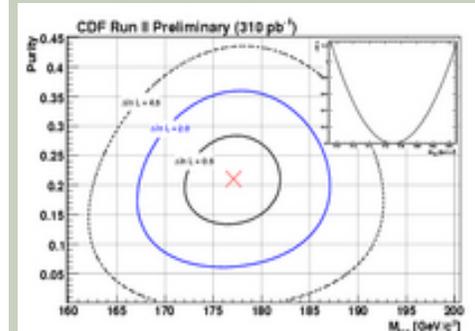
Judy Biggert met with Lab director Pier Oddone before yesterday's Users' Meeting. (Click on image for larger version.)

Congresswoman Judy Biggert of Illinois (13th CD) had her Ramsey Auditorium audience primed and ready when she declared she had good news to deliver as the Monday morning keynoter for the Annual Users' Meeting. And good news it was: the House of Representatives passed the Energy and Water Appropriations bill last week with \$535 million in funding for the Department of Energy's Office of Science -- \$35 million more than the original budget request by President Bush.

"Fermilab is the current home of the energy frontier," Rep. Biggert said to warm applause, "and you should get the resources you need to maintain Illinois at the energy frontier."

Fermilab Result of the Week

Tough Top: Nothing but Jet



X Marks the Spot of the all-jets top mass. The innermost black contour indicates the statistical error on the measurement which simultaneously fits for the top mass (x-axis) and the fraction of top-antitop events called "purity" (y-axis).

Top-antitop pairs produced at the Tevatron will produce six quarks (including two b quarks) in the final state of their decay chain 45% of the time. These quarks manifest themselves in the detector as sprays of particles called jets. Although these so-called "all-jets" events represent a considerable chunk of data, measuring the mass of these top quarks is no easy feat. The main reasons are the large amount of QCD background which produces six or more jets and the complication of combining the jets to form two top quarks. Only one out of 90 independent jet combinations corresponds to the true top-antitop decay. The advantage of top measurements with all-jets events is that none of the decay products are lost in the form of neutrinos, elusive particles which carry a major component of the top quark momenta in other types of top-antitop decays. Therefore, both the top and antitop quark can be completely reconstructed in the same event.

Showers/T-Storms Likely **79%/59%**[Extended Forecast](#)[Weather at Fermilab](#)**Current Security Status**[Secon Level 3](#)**Wilson Hall Cafe****Thursday, June 1**

- Beef Pepper Pot
- Buffalo Chicken Wings
- Cajun Breaded Catfish
- Sweet & Sour Pork over Rice
- Honey Mustard Ham & Swiss Panini
- Double Stuffed Pizza
- Carved Turkey

[Wilson Hall Cafe Menu](#)**Chez Leon****Thursday, June 1****Dinner**

- Gazpacho
- Seafood Paella
- Watercress Salad
- Apricot Lemon Almond Tart

[Chez Leon Menu](#)

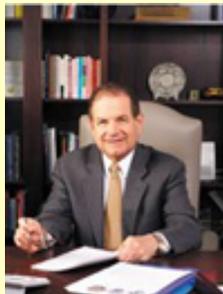
Call x4598 to make your reservation.

Search**Search the Fermilab Today Archive****Info**

Rep. Biggert cautioned that the budget process is not complete, with the bill now headed to the Senate. She said the increase in Office of Science funding could offer a target for reductions in the Senate. "We've got to be very vigilant so that doesn't happen," she said. "We're not yet at the finish line, so we must keep our eyes on the prize."

While her arrival had been delayed several minutes by traffic congestion due to an auto accident on Farnsworth Road, Rep. Biggert declared: "It's great to be anywhere but in Washington today." A member of the House Science Committee, Rep. Biggert chairs the Energy and Water Subcommittee with

oversight on civilian research programs in the DOE and Office of Science. She has been an advocate of elevating the status of director of the Office of Science to the under secretary level, and on Friday, May 26, Office of Science Director Ray Orbach was confirmed by the Senate as DOE's first Under Secretary of Science.



Dr. Raymond Orbach

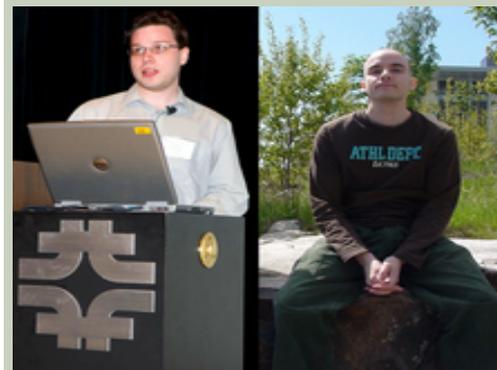
Rep. Biggert, whose district includes Argonne National Laboratory, was steadfast on two issues affecting the future of Fermilab and US high energy physics: she views basic research, especially in the physical sciences, as a critical component of the American Competitiveness Initiative; and she hopes to see the International Linear Collider "built right here in Illinois."

--Mike Perricone

[read more](#)

CDF physicists have recently measured the top quark mass in this difficult environment by adapting a technique originally developed in the DELPHI experiment at LEP. The technique creates a weight for each of the 90 possible top-antitop combinations according to the likelihood that the kinematics are consistent with top-antitop events and that two of the jets result from b quark decays. In this way, correctly combined top-antitop events are distinguished from background events and wrong combinations. By measuring simultaneously the signal-to-background ratio and the top mass, the CDF measurement determines the QCD background directly from the data.

Having analyzed roughly one third of the total available data, 310 pb⁻¹, the CDF measurement yields an already remarkable precision: $M_t = 177.1 \pm 4.9$ (stat) ± 4.7 (syst) GeV. Without improvements to the method the statistical uncertainties using 1 fb⁻¹ of data are expected to reduce to about 2 GeV, which is competitive with the best measurements to date. When combined with other channels the ultimate top mass precision will be improved, and the predictions of the Standard Model will be further tested.



the general public has a hard enough time distinguishing between protons and neutrons, let alone charm quarks and W bosons. And who can blame them? These particles are more the constructs of mathematical equations than something one can hold in his or her hand.

[Read More](#)

receive the information you need.

Recreation Ticket Service Charge

Beginning in May there will be a nominal \$.25 service charge added to all ticket and discount book sales in the Recreation Office.

English country dancing

English country dancing will continue at Fermilab's Barn, generally meeting the last Sunday afternoon of the month, will meet next on Sunday, June 25 at 2 p.m. Please contact folkdance@fnal.gov or call 630-584-0825 or 630-840-8194.

[Upcoming Activities](#)