

## Calendar

Thursday, March 26  
THERE WILL BE NO PHYSICS AND DETECTOR SEMINAR THIS WEEK  
2:30 p.m.  
[Theoretical Physics Seminar](#) - Curia II  
Speaker: David Morrissey, Harvard University  
Title: Candidates for (Inelastic) Dark Matter  
3:30 p.m.  
DIRECTOR'S COFFEE BREAK - 2nd Flr X-Over  
THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

Friday, March 27  
3 p.m.  
DIRECTOR'S COFFEE BREAK (NOTE TIME) - 2nd Flr X-Over  
4 p.m.  
[Joint Experimental-Theoretical Physics Seminar](#) - One West  
Speaker: Sasha Pronko, Fermilab  
Title: Searching for New Physics with Light  
8 p.m.  
[Lecture Series](#) - Ramsey Auditorium  
Speaker: Dr. Pier Oddone, Fermilab  
Title: The Future of Particle Physics and Fermilab  
Tickets: \$5

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

## Weather

 Partly sunny  
55°/36°

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

[Current Security Status](#)

## Feature

### Under pressure: Run coordinators keep their cool



Cons Gattuso, AD run coordinator, works with Mary Convery, deputy run coordinator, in the Main Control Room.

After an interrupted power outage in February, dozens of people crowded into a standing-room only planning meeting. They all wanted access to areas of the collider to do maintenance and repairs.

Cons Gattuso and Mary Convery had to schedule access around the Neutron Therapy Facility cancer treatment schedule while minimizing the amount of beam down time and late hours worked.

“Everyone is looking after their own systems,” Gattuso says. “They have their machines in mind, while we keep an eye on the entire accelerator complex.”

As the Accelerator Division's current run coordinator and deputy run coordinator, Gattuso and Convery balance running the complex's day-to-day operations, regular maintenance and immediate repairs. They also have to mesh the various personalities and interests of hundreds of people working in the AD and detector groups.

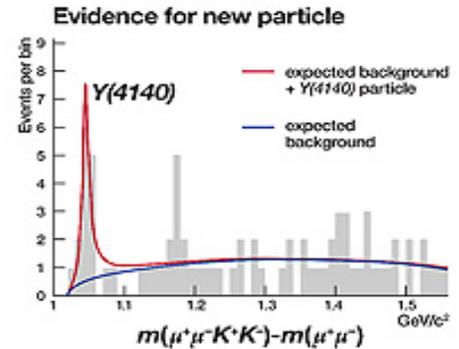
“It takes a special personality to make those decisions, to diffuse situations and to make it all work,” says Roger Dixon, AD head.

The pair foster a work atmosphere that strives for continual improvement mixed with a little fun.

Since they began in their respective positions four months ago, the Tevatron has reached record luminosities, including an integrated weekly luminosity of 74 inverse picobarns in December.

## Fermilab Result of the Week

### Evidence for an unexpected particle found at CDF: Why ask “Y”?



The mass distribution for the  $J/\psi + \Phi$  final state where the  $Y(4140)$  is seen as a bump, or resonance.

A new state of matter with puzzling properties found by CDF scientists may be the newest member of a family of unusual particles. In recent years, scientists have observed several unusual particles, which has led to speculation about exotic mesons. These particles could differ from typical mesons (quark-anti-quark bound states) because they could have two quark-anti-quark pairs (tetraquarks) or be in a configuration with a quark, anti-quark and gluon that coexist in one bound state (hybrid). A team of CDF researchers hoping to help understand this mystery looked for relatives of these unusual particles in a channel and energy range that paralleled the earlier discoveries.

CDF scientists chose the final state composed of two known particles (the  $J/\psi$  and the  $\Phi$ ) as a good candidate for the search. However, isolating such a sample from the vast CDF dataset was not easy. To do this, scientists isolated a parent particle (called the  $B^+$ ) that may decay into the search particles ( $J/\psi + \Phi$ ). CDF scientists then used the constraints from the properties of the parent particle to obtain a pure sample of events to use for the search.

The new particle,  $Y(4140)$ , was observed as a bump in the  $J/\psi + \Phi$  mass distribution. In the peak, scientists observed 14 +/- 5 signal events; the evidence for this particle is significant at greater than 3.8 standard deviations.

[Secon Level 3](#)[Wilson Hall Cafe](#)

Thursday, March 26

- Southwestern chicken tortilla
- Philly style cheese steak
- \*Garlic herb roasted pork
- Smart cuisine: Mardi Gras jambalaya
- \*Southwestern turkey wrap
- Assorted sliced pizza
- \*Marinated grilled chicken Caesar salads

[Wilson Hall Cafe menu](#)[Chez Leon](#)

Thursday, March 26

Dinner

- Coquilles Saint-Jacques
- Veal saltimbocca
- Spinach fettuccine
- Amaretto soufflé w/Frangelico crème Anglais

Wednesday, April 1

Lunch

- Cheese fondue
- Marinated vegetable salad
- Amaretto pears

[Chez Leon menu](#)

Call x3524 to make your reservation.

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

As an incentive to operators to boost luminosity, Gattuso promised operators that if the complex achieves 1,700 recorded inverse picobarns by May 3, he will show up to his regularly scheduled Friday morning meeting on May 8 wearing a pink tutu. The goal doubles the number of inverse picobarns recorded at the same time last year. Since the fiscal year began in October, the complex has recorded 1,200 inverse picobarns.

Gattuso says it is all in the name of continually improving collider operations.

"One of my top priorities is to make the job fun," he adds.

[Read more](#)

-- *Rhianna Wisniewski*

[Special Announcement](#)

## Fermilab Director Oddone gives public lecture on Friday, March 27

The Fermilab Lecture Series presents a public lecture titled "The Future of Particle Physics and Fermilab" this Friday (March 27) at 8 p.m. at Fermilab's Ramsey Auditorium in Batavia, Illinois. Fermilab Director Pier Oddone will talk about the search for the Higgs particle and dark matter as well as Project X, a proposed particle accelerator for Fermilab. Tickets are \$5 and can be purchased by calling 630-840-ARTS weekdays between 9 a.m. and 4 p.m.

[More information](#)[In the News](#)

## DOE science stimulus funding plan released; science nominee announced

From *AIP FYI*, March 25, 2009

Secretary of Energy Steven Chu outlined on Monday how his department will spend the \$1.2 billion that was provided in the economic stimulus act for science. Among the recipients of this funding will be nine national laboratories that will receive \$688.4 million.

This funding was contained in the \$787 billion American Recovery and Reinvestment Act which was signed into law by President Obama on February 17. The Explanatory Statement accompanying the legislation allowed DOE wide latitude in how the money

The  $Y(4140)$  is unusual. If it were a typical meson, the rate for this decay mode would be tiny. However, scientists suspect that this new particle is out of the ordinary, which explains the higher observation rate. Once scientists examine more data and search channels and other properties of the new particle, they may be able to confirm that the  $Y(4140)$  fits into a new "family" of particles.

For more information, please see the recently submitted [paper](#) or the Fermilab [press release](#).

-- edited by Craig Group



The following physicists played a leading role in this analysis: From left to right: Kai Yi, Iowa; Ray Culbertson, Fermilab; and Jane Nachtman, Iowa. Not shown: Ting Miao, Fermilab; and Kwangzoo Chung, Iowa.

[Accelerator Update](#)

March 23-25

- Five stores provided ~29 hours of luminosity
- Booster west anode power supply caused RF sparking
- Two TeV aborts; power supply fixed
- P1 transfer line vacuum cascade

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

[Announcements](#)

was to be spent:

“The conferees agree to provide an additional \$1,600,000,000 for the Science program. After taking into account the additional \$400,000,000 provided for Advanced Research Projects Agency-Energy (ARPA-E) in a separate account, the funding level for Science is the same as proposed by the House, instead of \$330,000,000 as proposed by the Senate.”

A statement issued by DOE on Monday provided the underlying rationale for how the funding would be spent:

“The DOE Office of Science Recovery Act funding is a strategic effort to achieve maximum short-term economic and jobs impact while bolstering the Nation’s long-term scientific strength through accelerated construction of key scientific facilities, acquisition of advanced scientific instrumentation, upgrades and modernization of our National Laboratory infrastructure, and expanded research support for graduate students, postdocs, and Ph.D. scientists working to solve critical problems in fields ranging from high energy and nuclear physics to biofuels, solar energy, solid-state lighting, superconductivity, electrical transmission and storage, carbon sequestration, combustion, environmental clean-up, materials science for energy efficiency, and other fields. Today’s discoveries will be tomorrow’s innovative technologies and hold the key to America’s continued prosperity and enhanced energy security in the coming decades.”

[Read more](#)

[Have a safe day!](#)

[Free step aerobics class in March](#)

[Blackberry Oaks Golf League](#)

[Sustainable Energy Club](#)

[Goodrich Quality Theater and AMC Theater tickets](#)

[WDRS researches transit benefit program](#)

[Discount tickets to "Dora the Explorer Live" - March 26-29](#)

[Kyuki Do classes - March 30](#)

[Muscle toning classes - March 31](#)

[Conflict management & negotiation skills class April 1](#)

[English Country Dancing, April 5](#)

[COMSOL Multiphysics workshop at Fermilab - April 6](#)

[Outlook 2007 new features class offered April 8](#)

[Harlem Globetrotter employee discount - April 13](#)

[Artist Within - employee art show '09](#)

[MathWorks Seminar - April 21](#)

[Coed softball season begins May 13](#)

[Discount tickets to "1964"...Beatles tribute - June 6](#)

[SciTech summer camps](#)

[Additional Activities](#)

[Submit an announcement](#)