

Calendar

[Have a safe day!](#)

Tuesday, March 30
3:30 p.m.
DIRECTOR'S COFFEE BREAK
- 2nd Flr X-Over
THERE WILL BE NO
ACCELERATOR PHYSICS
AND TECHNOLOGY
SEMINAR TODAY

Wednesday, March 31
3:30 p.m.
DIRECTOR'S COFFEE BREAK
- 2nd Flr X-Over
4 p.m.
[Fermilab Colloquium](#) - One
West

Speaker: Margaret Murnane,
University of Colorado,
Boulder / NIST
Title: Attosecond Light and
Science at the Time-scale of
the Electron - Coherent X-Rays
from Tabletop Ultrafast Lasers

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

[Upcoming conferences](#)

Campaigns

[Take Five](#)

[Tune IT Up](#)

H1N1 Flu

For information about H1N1,
visit Fermilab's flu information
[site](#).

Weather

US LHC press release

Physics begins at the Large Hadron Collider

Batavia, IL and Upton, NY – The Large Hadron Collider has launched a new era for particle physics. Today at 6:06 a.m. CDT (1:06 p.m. Central European Summer Time at CERN in Geneva, Switzerland), the first particles collided at the record energy of 7 trillion electron volts (TeV). These collisions mark the start of a decades-long LHC research program, and the beginning of the search for discoveries by thousands of scientists around the world.

"Today's first 7 TeV collisions are a great start for LHC science," said Dr. Dennis Kovar, Associate Director of Science for High Energy Physics at the U.S. Department of Energy. "We eagerly anticipate the work of the world's physicists as they begin their search for dark matter, extra dimensions, and the ever-elusive Higgs boson."

Today's proton collisions were recorded by the LHC experiments' particle detectors, known by their acronyms: ATLAS, CMS, ALICE and LHCb. While the LHC accelerator brings the protons up to their maximum energy and steers them around the 16-mile ring into collision, the experiments use massive particle detectors to record and analyze the collision debris.

"The LHC experiments are the world's largest and most complex scientific instruments, and scientists from American universities and laboratories have made vital contributions to each of them," said Dr. Edward Seidel, Acting Assistant Director of the National Science Foundation's Directorate for Mathematical and Physical Sciences. "We wish all the LHC scientists success in their quest to solve some of the most profound mysteries of our universe."

More than 1,700 scientists, engineers, students and technicians from 89 American universities, seven U.S. Department of Energy (DOE) national laboratories, and one supercomputing center helped design, build and operate the LHC accelerator and its four massive particle detectors. American participation is supported by the DOE's Office

Director's Corner

Kudos!



Fermilab Director Pier Oddone

With half of the fiscal year gone by, we have several records worth celebrating. The first is the new record in the Tevatron peak luminosity. It is quite remarkable that our accelerator team is still able to coax new records out of the collider and find improvements. The last record was quite significant: about a 7 percent increase over the previous record. So far this year we have accumulated 1.3 inverse femtobarns of data, well toward a record year with more than 2 inverse femtobarns, - provided we do not have some unexpected breakdown. The pace of publications in the archival literature continues with about half a dozen publications per month from the Tevatron on a rich variety of physics.

The number of protons delivered on target for the MINOS experiment is also heading for a record, perhaps more than 3×10^{20} protons on the neutrino target by the end of the run. New measurements on electron appearance should appear soon, as well as the results from the last several months of running in antineutrino mode. MiniBooNE continues to accumulate luminosity and should also have new results with an antineutrino beam, although the measure of their integrated protons-on-target is limited when the MINOS beam is running well.

Fermilab set equally important records in the first half of the fiscal year in the area of safety. Although I am afraid to brag about these records lest I tempt fate, I want to urge you to keep up the good work. So far, we have gone half a year without a single accident that required either time away or restrictions. This

Sunny
61°/45°

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

Current Security
Status

[Secou Level 3](#)

Wilson Hall Cafe

Tuesday, March 30

- Bagel sandwich
- Tomato bisque soup
- Lemon pepper club
- Beef fajitas
- Korean garlic chicken
- Grilled chicken Caesar salad
- Assorted sliced pizza
- Rio Grande taco salad

[Wilson Hall Cafe Menu](#)

Chez Leon

Wednesday, March 31

- Lunch
- Chicken w/lime sauce
 - Cumin roasted potatoes
 - Sautéed zucchini
 - Chocolate raspberry cake

Thursday, April 1

- Dinner
- Brochettes of melon, prosciutto & fresh mozzarella
 - Lobster tail w/champagne butter sauce
 - Saffron rice & red pepper pilaf
 - Honey-glazed peach tart w/ mascarpone cream

[Chez Leon Menu](#)

Call x3524 to make your reservation.

Archives

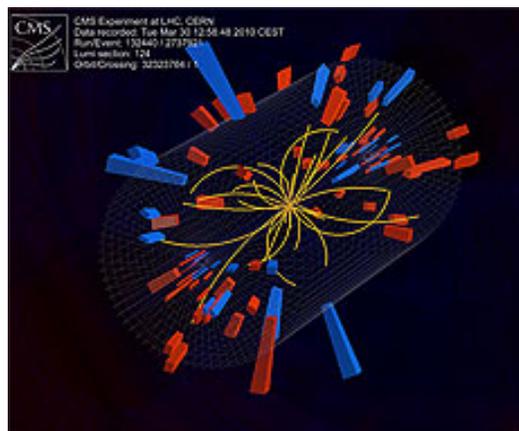
of Science and the National Science Foundation (NSF).

Now, the real work begins for the LHC teams. Over the next 18 to 24 months, the LHC accelerator will deliver enough collisions at 7 TeV to enable significant advances in a number of research areas. As data begins to pour from their detectors, more than 8,000 LHC scientists around the world will sift through the flood in search of the tiny signals that could indicate discovery.

[Read more](#)

Photo of the Day

LHC achieves and celebrates record 7 TeV collisions



The image above shows the first approved event display images from CMS of 7 TeV collisions. *Image courtesy of CERN.*



CERN staff and scientists celebrate the LHC's first high-energy collisions in the CERN Control Centre Tuesday. *Image courtesy of CERN.*

In the News

compares with a rate of one such accident a month for last year. In the past we have never achieved our zero goal for such an extended period. It requires your continuous awareness, and you are doing it! Recordable cases are also down this year with only five recorded so far.

There is one additional record to celebrate that occurred earlier today: We had the first collisions at 7 TeV center-of-mass energy in the LHC. We all hope this is the start of smooth operations and the opening of significant space for new discoveries.

Accelerator Update

March 26-29

- Four stores provided ~67.25 hours of luminosity
- Booster kicker cable reterminated
- P1 transfer line vacuum burst
- MIRF12 bypassed
- MiniBooNE reported dewatering problems
- NuMI reported humidifier problems

* The integrated luminosity for the period from 3/22/10 to 3/29/10 was 61.3 inverse picobarns. NuMI reported receiving $7.82E^{18}$ protons on target during this same period.

[Read the Current Accelerator Update](#)

[Read the Early Bird Report](#)

[View the Tevatron Luminosity Charts](#)

Announcements

Latest Announcements

[Toastmasters at Fermilab - April 1](#)

[Fermilab blood drive April 19-20](#)

[Ask HR - 15th floor comes to PPD today](#)

[The Recipe Exchange Potluck lunch](#)

[AutoCAD Intermediate classes - June 22 -24](#)

[AutoCad Fundamentals class - June 6-8](#)

[FORE! The 2010 golf season is about to hit you](#)

[SciTech summer camps start June 14](#)

[Butts & Guts class - sign up now](#)

[Fermilab Today](#)[Result of the Week](#)[Safety Tip of the Week](#)[CMS Result of the Month](#)[User University Profiles](#)[ILC NewsLine](#)**Info****Fermilab Today**

is online at:

www.fnal.gov/today/

Send comments and suggestions to:

today@fnal.gov

Visit the Fermilab

[home page](#)[Unsubscribe](#) from *Fermilab Today***New *Astrobulletin* feature investigates dark mystery**From ***American Museum of Natural History***, March 24, 2010

The "Expanding Universe," a spectacular new seven-minute video produced by the American Museum of Natural History for the *AstroBulletin*, investigates one of the major mysteries confronting astrophysicists today: why is the universe expanding at a steadily increasing rate? When astronomer Edwin Hubble discovered that the universe was expanding in 1929, scientists assumed that the gravitational attraction between galaxies would slow the expansion rate of the universe. But in 1998, two teams of scientists discovered that the expansion rate was not slowing down but was, in fact, accelerating. Could the mysterious "dark energy" be responsible, or perhaps some aspect of gravity we have yet to understand? The "Expanding Universe" interviews two leading scientists, Alex Filippenko, of the University of California, Berkeley and the University of California's Lick Observatory, and Josh Frieman, of the theoretical astrophysics group at Fermilab, to untangle this cosmic mystery.

[Read more](#) or watch the video. Fermilab's Dark Energy Survey project and Josh Frieman, DES project director are featured about 4:50 into the video.

[Blackberry Oaks Monday night golf league](#)[Watch your mail station for the arrival of your Fermilab statement of benefits](#)[Employee discount at Batavia Rosati's](#)[Fermilab summer daycamp registration deadline April 2](#)[Harlem Globetrotters special ticket price - April 15](#)[Qi Gong, Mindfulness and Tai Chi Easy for Stress Reduction](#)[Argentine Tango through Wednesday, student discount](#)[Hiring summer students for 2010](#)[Calling all softball players](#)[Requesting donations for Fermi Maternity Closet](#)[Excel Programming with VBA class - March 30 and April 1](#)[Fermilab Management Practices seminar classes begin in April](#)[March 31 deadline to enroll young adult dependents](#)[NALWO bus trip to The Museum of Science and Industry - April 24](#)[Intermediate /Advanced Python Programming - May 19-21](#)[Submit an announcement](#)