

Feature Story

From CERN: CMS observes a potentially new and interesting effect

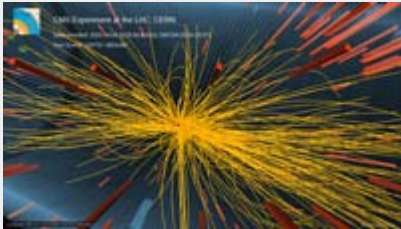


Image of a 7 TeV proton-proton collision in CMS producing more than 100 charged particles.

After almost six months of operation, experiments at the LHC are starting to see signs of potentially new and interesting effects. In results announced by the CMS collaboration today, correlations have been observed between particles produced in 7 TeV proton-proton collisions.

In some of the LHC's proton-proton collisions, a hundred or more particles can be produced. The CMS collaboration has studied such collisions by measuring angular correlations between the particles as they fly away from the point of impact, and this has revealed that some of the particles are intimately linked in a way not seen before in proton collisions.

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Calendar

Upcoming meetings, conferences, workshops

[Topical Workshop on Electronics for Particle Physics \(TWEPP-10\)](#)

Aachen, Germany
20-24 September 2010

[Symposium on the Superconducting Science and Technology of Ingot Niobium](#)

Jefferson Lab, Newport News, USA
22-24 September 2010

[1st International Workshop on Accelerator-Driven Sub-Critical Systems & Thorium Utilization](#)

Virginia Tech, Blacksburg, Virginia, USA
27-29 September 2010

[19th International Spin Physics Symposium \(SPIN 2010\)](#)

Juelich, Germany
27 September - 2 October 2010

[EUNET Annual Meeting 2010](#)

DESY, Hamburg, Germany
29 September - 1 October 2010

[High precision measurements of luminosity at future linear colliders and polarization of lepton beams](#)

Tel Aviv University, Tel Aviv, Israel
3-5 October 2010

Around the World

From Fermilab: Fermilab constructs pioneering accelerator test facility



The construction includes three interconnected structures, which will house the test accelerator, a test area for cryomodules and the equipment for a powerful new refrigerator.

Batavia, Ill.—Officials at the Department of Energy's Fermi National Accelerator Laboratory announced today that the laboratory has started phase II of the construction of a pioneering facility to advance a technology that will be critical to the next generation of particle accelerators.

The new facility, which will occupy three buildings and host a 460-foot-long test accelerator, will be the first of its kind in the United States.

[Read more...](#)

In the News

From *the Telegraph*
22 September 2010

Large Hadron Collider signal 'may show big bang conditions'

A never-before-seen signal in a collision at the Large Hadron Collider has raised hopes that the giant particle accelerator is on the verge of serious breakthroughs.

[Read more...](#)

From *Daily Herald*
22 September 2010

Fermilab's new accelerator work enters next phase

The idea is to test equipment in the modules for construction of other cryogenic accelerators, including those for the proposed Project X experiment at the Batavia-based federal laboratory and the International Linear Collider.

[Read more...](#)

From *Science*
21 September 2010

American Physicists Scrounge to Stay in 'God Particle' Race

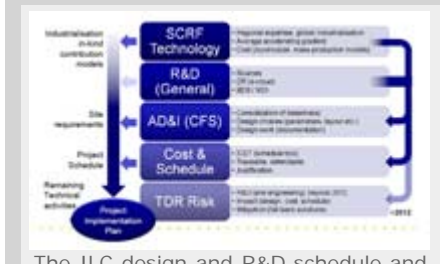
The director of the sole particle physics laboratory in the United States says he has found ways to scrape up about one-third of the money the lab will need to keep pursuing the most sought-after particle in physics, the Higgs boson.

[Read more...](#)

From *AFP*

Director's Corner

Beyond the Technical Design Report



The ILC design and R&D schedule and key milestones through 2012

The main focus of the efforts of the ILC Global Design Effort (GDE) are to carry out the critical R&D programme needed for a successful ILC and to build on the ILC Reference Design by creating a *Technical Design Report* (TDR) that can be used as the basis of funding proposals to collaborating governments. The actual baseline configuration for the TDR is being decided over the coming months and we are on track to complete and document the technical design by the end of 2012. At that time, we will produce both a *Technical Design Report* and a *Project Implementation Plan*. What will happen then?

[Read more...](#)

-- Barry Barish

Director's Corner Archive

Announcements

arXiv preprints

[1009.4184](#)

Beauty and charm to study new physics at future linear colliders

[1009.3929](#)

Charged Higgs-boson production at Linear Colliders - SUSY-QCD corrections in the framework of a numerical calculation of loop integrals

[1009.3571](#)

Neutral Higgs boson pair production at the LC in the Noncommutative Standard Model

[1009.3554](#)

$e^+ e^-$ to $\mu^+ \mu^-$ scattering in the Noncommutative standard model

[eCloud 2010](#)

Cornell University, NY, USA
8-12 October 2010



[International Workshop on Linear Colliders 2010 \(IWLC2010\)](#)
[ECFA-CLIC-ILC joint meeting](#)
CERN and CIGC, Switzerland
18-22 October 2010

Upcoming schools

[Fifth International Accelerator School for Linear Colliders](#)
Villars-sur-Ollon, Switzerland
25 October - 5 November 2010

[GDE Meetings calendar](#)

[View complete ILC calendar](#)

21 September 2010

Atom smasher scientists spot potential new discovery: CERN
GENEVA – Scientists at the world's biggest atom smasher said Tuesday they appeared to have discovered a previously unobserved phenomenon in their quest to unravel the deepest secrets of the universe.
[Read more...](#)

From *CERN Press Release*
17 September 2010

CERN Council approves the Laboratory's Medium Term Plan
During an intense series of meetings, which concludes today, the CERN1 Council overwhelmingly approved the laboratory's revised Medium Term Plan for the period 2011 to 2015.
[Read more...](#)

From *Fermilab Today*
17 September 2010

Scientific opportunity: the Tevatron and the LHC
This competitive aspect is real, and probably adds spice to the scientific exploration, but for us such reporting often feels like spilling the entire pepper shaker over a fine meal.
[Read more...](#)