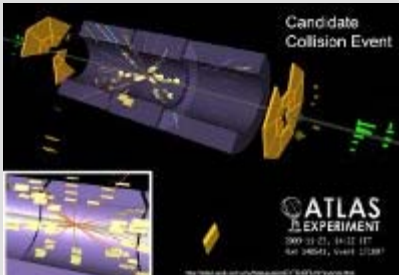


### Feature Story

#### From CERN: Two circulating beams bring first collisions in the LHC



A candidate collision event from the ATLAS detector. Image: CERN

Geneva, 23 November 2009. Today the LHC circulated two beams simultaneously for the first time, allowing the operators to test the synchronization of the beams and giving the experiments their first chance to look for proton-proton collisions. With just one bunch of particles circulating in each direction, the beams can be made to cross in up to two places in the ring. From early in the afternoon, the beams were made to cross at points 1 and 5, home to the ATLAS and CMS detectors, both of which were on the look out for collisions. Later, beams crossed at points 2 and 8, ALICE and LHCb.

[Read more...](#)

### BlogLine

21 November - [Frank Simon Strategy Discussions – And LHC Excitement](#)

20 November - [Ingrid Gregor Scotty, beam me up...](#)

... and don't miss Paul Jackson's coverage from [shifts at ATLAS](#)

[Follow all Quantum Diaries](#)

### Calendar

#### Upcoming meetings, conferences, workshops

[ILC Accelerator Design & Integration Meeting](#)  
DESY, Germany  
2-3 December 2009

### Feature Story

#### From CERN: The LHC is back



Cheers in the CERN Control Centre when the first beam was captured in the LHC. Image: CERN.

Geneva, 20 November 2009. Particle beams are once again circulating in the world's most powerful particle accelerator, CERN's Large Hadron Collider (LHC). This news comes after the machine was handed over for operation on Wednesday morning. A clockwise circulating beam was established at ten o'clock this evening. This is an important milestone on the road towards first physics at the LHC, expected in 2010.

"It's great to see beam circulating in the LHC again," said CERN Director General Rolf Heuer. "We've still got some way to go before physics can begin, but with this milestone we're well on the way."

[Read more...](#)

### Announcements

#### Early edition of NewsLine this week

Due to the Thanksgiving Holiday in the United States this Thursday, the ILC NewsLine team are sending you an early edition of ILC NewsLine this week. The publication will return to its normal schedule next week.

### In the News

From *Next Big Future*  
20 November 2009

#### Future Colliders

The New Scientist looks at the future of particle colliders beyond the Large Hadron Collider. Regardless of what is found particle wise (Higgs or no Higgs Boson) there will be new physics to investigate or models of the universe to refine (standard model or something else, supersymmetry or string theory).

[Read more...](#)

### Director's Corner

#### What drives the development of technology?

Five years ago, when superconducting radiofrequency (SCRF) technology was chosen for the International Linear Collider, there were precious few high-gradient, 35-Megavolts-per-metre (MV/m) cavities. Now the picture is quite different: this



Cavity electro-polishing system installation at DESY.

autumn we congratulate our industrial and institutional partners in Japan and US for successfully fabricating, processing and testing several high-performance nine-cell superconducting cavities. We also congratulate the European XFEL team, working at DESY, for the successful construction, assembly and testing of the first 'full-ILC-performance', 32 MV/m average, cryomodule. Taking all ILC cavity tests into account, a globally-based pattern of achievement and success emerges, giving confidence that we will meet or even exceed the forward looking-goal we set for ourselves at Snowmass in 2005. The steps along this path: chemical rinses, diagnostics for inspection, company visits, standardised recipes and inter-institutional database teams reflect the journey and have been described in earlier 'Director's Corners', written by me and by Akira Yamamoto.

[Read more...](#)

-- Marc Ross

[Director's Corner Archive](#)

### Image of the Week

#### French ILC physicists visit XFEL village at CEA

### Upcoming school

[The US Particle Accelerator School sponsored by the UC Santa Cruz](#)  
Santa Cruz, CA, USA  
18-29 January 2010

[GDE Meetings calendar](#)  
[View complete ILC calendar](#)

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From *Softpedia*  
20 November 2009  
**The Future of Particle Accelerators**  
The LHC is not the end  
[Read more...](#)

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From *New Scientist*  
20 November 2009  
**Future colliders: Beyond the LHC**  
The Large Hadron Collider is by no means the last of the particle smashers. A group at CERN recently explored the various scenarios that might emerge from the atomic debris in Geneva – and how they would shape what colliders we build next. We draw out the key points about each of the scenarios.  
[Read more...](#)



The French detector and physics community met on 9-10 November at CEA/Irfu laboratory, in Saclay, France for their annual SOCLE meeting (Seminar Oriented towards a Contribution to an Electron Linear Collider). At this occasion, Olivier Napoly and Stéphane Berry, Coordinators of the module assembly at CEA, showed them the new XFEL village at CEA, which is the facility where the 103 XFEL modules will be assembled industrially, starting at the end of 2010. Photo: CEA

If you are as curious as the French physicists to see more, you can [view all images of the visit here](#).