



## *Séminaire du Laboratoire de l'Accélérateur Linéaire*

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CERN (Switzerland)

**Mardi 14 Juin 2011 à 11 :00**

## **LHC status and performance in 2011**

After an initial pilot run in December 2009, the LHC started its first run at 3.5 TeV beam energy end of February 2010, the highest possible energy achievable with the present hardware constraints. Given the very large amount of energy that has to be stored in the LHC beams at high luminosity, the intensity was ramped up progressively over 2010 to ensure protection of the accelerator against beam induced damage. In parallel to the intensity increase, a dense commissioning program had to be performed in a very short time. By the end of the 2010 proton run, the peak luminosity reached  $2 \cdot 10^{32} \text{ cm}^{-2} \text{ s}^{-1}$ . The analysis of the 2010 run led to a modification of the running conditions in 2011 : smaller beam sizes at the collision points and reduced bunch spacing of 50 ns or 75 ns. After a few weeks of recommissioning, operation with beams of 50 ns was started in April 2011. Excellent performance of all machine components allowed the LHC to reach a luminosity of  $10^{33} \text{ cm}^{-2} \text{ s}^{-1}$  in the second half of May. This presentation will discuss the current performance achievements and present the expected performance of the LHC for 2011.

**Salle 101 du LAL - Bât. 200, Orsay**

Thé et café seront servis 1/4 h avant le séminaire



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