LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE

Séminaire LAL

Mathieu Benoit

(CERN)

Mardi 19 février 2013 à 11h00

Research and development on vertex detector technology for the Compact Linear Collider (CLIC)

on behalf of the Linear Collider Detector studies group

The Compact Linear Collider's (CLIC) vertex detectors present a new challenge in terms of requirements for material budget (0.2% X_0. 200 um of Si), cooling system (air cooling), temporal (~10 ns) and spatial resolution (3 um) with regard to LHC and ILC experiments. The hybrid planar pixel sensor technology, due to its robustness, low noise and fast timing properties, is currently studied using TCAD, GEANT4 and experimental measurements to determine its viability as the main building block of CLIC vertex detectors. I will present the recent R&D effort of the LCD group in terms of mechanical integration, powering, ASIC development and sensor design to produce a suitable detector system meeting the CLIC vertex detectors requirement.

Salle 101 - Bât. 200, Orsay

Thé et café seront servis ¼ h avant le séminaire

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