

Service de Physique Nucléaire



Séminaire

le vendredi 27 avril 2012 à 11h00

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

Picosecond timing at the LHC

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and

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As the LHC enters the 2012 run, the challenge of dealing with several dozen proton-proton collisions within a tiny interval of a few hundred picoseconds have implications for future evolution of the detectors. Whereas the radiation doses currently encountered are consistent with what was anticipated, pileup has already exceeded the level anticipated in the LHC design, due to the 50 nsec running mode now being adopted.

In order for event time to be an effective tool in resolving pileup, aspects of the event (i.e. charged particle arrival) time should be resolved at the level of several picoseconds. We describe a project started 4 years ago using deep depleted, Silicon avalanche photodiodes for direct charged particle detection. We report results fusing LNF, PSI and ATF test beams which have demonstrated performance consistent with these requirements.

Le café sera servi 10 minutes avant

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http://irfu-i.cea.fr/Phocea/Vie_des_labos/Seminaires/index.php