## **PHENIICS Doctoral School Days**



ID de Contribution: 106 Type: Oral Presentation

## Standalone track reconstruction for the LHCb upgrade scintillating fibre tracker and study of double charm B decays at LHCb.

lundi 9 mai 2016 15:00 (15 minutes)

The project of the LHCb upgraded detector foresees the presence of a scintillating fiber tracker (SciFi) for the LHC run III starting in 2020. We will describe the design and the performances of the newly developed algorithm used for the reconstruction of stand-alone tracks in the SciFi, called Hybrid Seeding.

The B mesons double charm decays have been introduced to explain the discrepancy observed between semileptonic branching ratio decays and the number of charmed mesons produced in B decays. Nowadays, there are some of the double charm decay modes which have not been observed and  $B^0 \to D^0 \overline{D}^0 K^{*0}$  is one of them. This decay channel can improve our understanding on multi-body B hadrons decays containing multiple charmed final states. Furthermore, it allows to perform searches of exotic mesons looking to the  $D^0 \overline{D}^0$  system invariant mass spectrum. An overview of the analysis work done for will be presented.

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