



Laboratoire LEPRINCE-RINGUET  
Ecole polytechnique IN2P3/CNRS

# Séminaire

## Observation of CP violation in neutral charm decays at LHCb

The existence of CP violation in the decays of strange and beauty mesons is well established experimentally by numerous measurements. By contrast, CP violation in the decays of charmed particles has escaped observation, until today. During the first two runs of the LHC, the LHCb collaboration has collected a sample of charmed hadrons of unprecedented size. This sample enables some of the most sensitive searches for CP violation ever performed. In this seminar, the observation of CP violation with  $D^0 \rightarrow K^- K^+$  and  $D^0 \rightarrow \pi^- \pi^+$ , performed using the full data set collected by LHCb so far, which corresponds to an integrated luminosity of  $9\text{fb}^{-1}$ , will be presented. In addition, a brief overview of a recent measurement of charm mixing at LHCb will be given.

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**Lundi 1<sup>er</sup> juillet  
14h00**

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Responsables séminaires

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