

Lundi 09 janvier 14h00

CEA-Saclay Bat 141, salle André Berthelot

First evidence for CP Violation in charm decays at LHCb

ANGELO CARBONE

The LHCb Collaboration has recently observed evidence of CP violation in neutral D meson decays. CP violation in the charm sector is generically expected to be very small in the Standard Model, but can be enhanced in many models of new physics. In this seminar we will present the results of a search for time-integrated CP violation in $D^0 \rightarrow h^- h^+$ ($h = K, \pi$) decays, performed with around 0.6 fb^{-1} of data collected by LHCb in 2011. The difference in CP asymmetry between $D^0 \rightarrow K^- K^+$ and $D^0 \rightarrow \pi^- \pi^+$, $\Delta A_{CP} \equiv A_{CP}(K^- K^+) - A_{CP}(\pi^- \pi^+)$ is measured to be $\Delta A_{CP} = [-0.82 \pm 0.21(\text{stat.}) \pm 0.11(\text{syst.})]\%$. This differs from the hypothesis of CP conservation by 3.5σ .

Le café sera servi 10 minutes avant.

NB : La présentation d'une pièce d'identité est exigée à l'entrée du centre. Tous les auditeurs extérieurs sont priés de prévenir à l'avance Emilie Chancrin, tél. 01 69 08 23 50, e-mail : emilie.chancrin@cea.fr. (U.E. : délai de 24 h, hors U.E. : délai de 4 jours).