



Contribution ID: 241

Type: Talk

## **[317] Flavour tagging in $pp$ collisions at LHCb**

Wednesday 23 August 2017 18:30 (15 minutes)

Measurements of CP violation and flavour oscillations of neutral  $B$  mesons require the knowledge of the meson flavour at the production time.

Flavour tagging algorithms in the LHCb experiment, despite the challenging, harsh environment due to  $pp$  collisions, allow to perform such measurements with very high precision.

Recent examples feature world-leading results in the determination of the CKM angle  $2\beta_s$  and the weak phase difference  $\phi_s$ , as well as measurements of the CKM angle  $\gamma$ .

Flavour tagging algorithms exploit the correlations between the  $B$  meson flavour and different features of the event, and rely on advanced multivariate analysis techniques.

The details of these algorithms are presented, together with their performances.

**Author:** BATTISTA, Vincenzo (Ecole Polytechnique Federale de Lausanne (CH))

**Presenter:** BATTISTA, Vincenzo (Ecole Polytechnique Federale de Lausanne (CH))

**Session Classification:** Nuclear, Particle-and Astrophysics (TASK-FAKT)

**Track Classification:** Nuclear, Particle- and Astrophysics (TASK - FAKT)