Contribution ID: **138** Type: **Poster**

Measurement of non-prompt D-mesons production in pp collisions at $\sqrt{s}$ = 13 TeV using Machine Learning (ML) techniques with ALICE

Tuesday 5 September 2023 17:30 (2h 10m)

The production of hadrons containing charm or beauty quarks in pp collisions provides an important test for quantum chromodynamics calculations. These measurements also serve as reference for more complex systems such as Pb–Pb collisions, helping to characterize the various in-medium partonic energy loss mechanisms and their dependence on the quark mass.
The excellent particle identification, track and decay-vertex reconstruction capabilities of the ALICE experiment, together with machine-learning techniques for multi-class classification, are exploited to separate the non-prompt D mesons from the prompt ones. The precise measurements of non-prompt D-mesons production, in particular, allow us to investigate the production of beauty quarks in pp collisions. In this contribution, the latest results of the ALICE Collaboration on the measurement of non-prompt D mesons with Machine-Learning techniques will be presented. The results will also be compared with various theoretical models.

Category

Experiment

Collaboration (if applicable)

ALICE Collaboration

Author: BALA, Renu (University of Jammu (IN))

Presenter: BALA, Renu (University of Jammu (IN))

Session Classification: Poster Session

Track Classification: Heavy Flavor