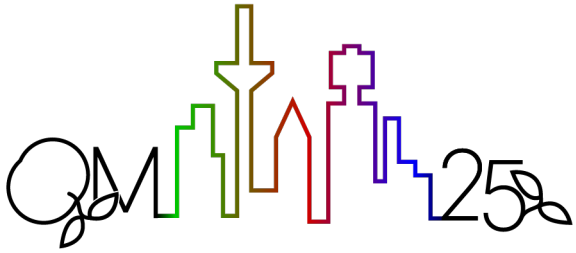

Contribution ID: **256** Type: **Poster**

Measurement of D+ -mesons production in pp collisions at √s = 13.6 TeV with ALICE

The production of hadrons containing charm or beauty quarks in proton-proton (pp) collisions mainly happens via initial hard-scattering processes and provides an important test for quantum chromodynamics calculations. In fact, due to their large masses, heavy quarks can only be produced in processes with high-momentum transfer and hence can be ascribed by perturbative QCD calculations. These measurements also serve as a reference for more complex systems such as Pb–Pb collisions, helping to infer information about the properties of the interaction of heavy quarks with the constituents of the colour-deconfined medium produced in heavy-ion collisions, the quarkgluon plasma, such as the colour-charge and mass dependence of the in-medium energy loss.

In this contribution, the first studies of D+-meson production in pp collisions at √s = 13.6 TeV collected in the LHC Run 3 with the upgraded ALICE detector will be reported. D mesons arereconstructed via their hadronic decays at central rapidity with ALICE detector thanks to its
excellent particle identification, track and decay-vertex reconstruction capabilities.

Category

Experiment

Collaboration (if applicable)

ALICE

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

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

Session Classification: Poster session 2

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