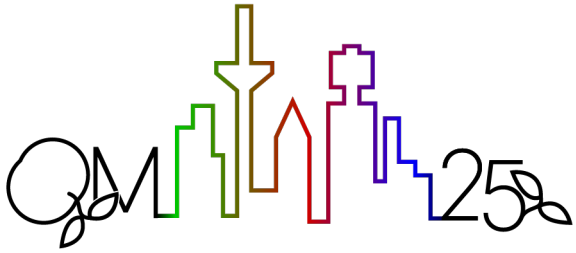

Contribution ID: **734** Type: **Poster**

Flow of heavy-flavor hadrons in small systems with LHC-ALICE in Run 3 data

To study the nature of collective phenomena in small collision systems, this contribution presents the measurement of the second harmonic of the anisotropic flow of heavy-flavor hadrons such as D_0 and $^{+}_{C}$, also denoted as elliptic flow or v_2. The two-particle correlations method is used, where heavy-flavor candidates are correlated with hadrons.

Heavy-flavor candidates are reconstructed in the Time Projection Chamber
(TPC) of the ALICE detector and are correlated with hadrons from the forward region. This can be done thanks to the newest additions of the ALICE detector for Run 3, the Muon Forward Tracker (MFT) and the FV0 subsystem of the Fast Interaction Trigger.

Using hadrons from the forward region allows us to increase the Δη gap in the two-dimensional correlation function to eliminate the near-side jet peak, and most of other non-flow contributions.

To do so, a newly developed "3x2PC"method using TPC-MFT, TPC-FV0 and
MFT-FV0 correlations will be used along with template fit to extract the v_2 coefficient.

The results presented will mostly focus on correlations with heavy-flavor candidates reconstructed in the TPC, and hadrons from the MFT in proton-proton collisions at √s = 13.6 TeV.

Category

Experiment

Collaboration (if applicable)

ALICE

Author: LEJEUNE, Alexian Marc (Czech Technical University in Prague (CZ))

Presenter: LEJEUNE, Alexian Marc (Czech Technical University in Prague (CZ))

Session Classification: Poster session 2

Track Classification: Collective dynamics & small systems