Contribution ID: **207** Type: **Oral Presentation**

Open and hidden strangeness production study via high pT dihadron correlations in pp and p-Pb collisions with ALICE at the LHC

Thursday, June 4, 2020 12:30 PM (20 minutes)

Complementary to jet reconstruction, two-particle correlations in $\Delta\eta$ and $\Delta\varphi$ are used to study jets, and in particular their particle composition. While in Pb-Pb collisions this is done to characterize the quark-gluon plasma, pp and p-Pb collisions serve as a reference and are of interest on their own for their input into the understanding of particle production mechanisms. Recent ALICE results on the production of strange particles in small systems (pp and p-Pb collisions) reveal the possibility of having similar strange hadron production mechanisms in all collision systems. We study the production mechanism of hidden strangeness (ϕ meson) and open strangeness (K^0_S meson and Λ ($\bar{\Lambda}$) baryon) in jets via two-particle correlations between the strange hadrons and charged primary hadrons in pp collisions at $\sqrt{s} = 13$ TeV and p-Pb at $\sqrt{s_{NN}} = 5.02$ TeV collected with the ALICE experiment at the LHC.

In this talk, the dependence of the per-trigger yields of strange hadrons on the transverse momenta of the trigger and associated particles, as well as on the event multiplicity, will be presented on both the near-side and away-side of the h-V^0 and h-ϕ correlation functions. Moreover, the ratios of these yields to the yields extracted from the h-h correlation function will be shown. The presented results will be compared among the three hadron species. In addition, a comparison to different MC generators will be presented, which will allow us to better understand differences in the production of open strange mesons, baryons and hidden strange resonances.

Collaboration (if applicable)

ALICE

Track

Jets and High Momentum Hadrons

Contribution type

Contributed Talk

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Session Classification: Parallel

Track Classification: Jets and High Momentum Hadrons