



Contribution ID: 81

Type: **Experimental talk**

## Event-shape studies of strangeness production in $\sqrt{s} = 13$ TeV pp collisions with ALICE

*Wednesday 19 May 2021 09:30 (20 minutes)*

Significant strangeness enhancement and radial flow have been observed in high-multiplicity pp collisions at LHC. The origin of these effects is still under debate. In this contribution, new and more differential measurements are presented, making use of event-shape techniques to study final-state topologies: (i) the transverse sphericity, which aims to classify events into jetty (back-to-back) and isotropic to isolate hard and soft effects, respectively; (ii) the self-normalized Underlying Event (UE) activity, RT, which allows the UE to be significantly suppressed or enhanced. Using observables that control the hard-to-soft ratio and the UE, one gains novel insights into the mechanism responsible for the QGP-like effects in small systems. The results will be presented for a large variety of strange and non-strange hadrons and resonances ( $\pi$ , K,  $K^{*0}$ , p,  $\phi$ , and  $\Xi$ ) and will be compared to calculations using both PYTHIA 8 and EPOS LHC event generators.

### Collaboration

ALICE

**Author:** NASSIRPOUR, Adrian Fereydon (Lund University (SE))

**Presenter:** NASSIRPOUR, Adrian Fereydon (Lund University (SE))

**Session Classification:** Open and New (Charge and Flavor)

**Track Classification:** Strangeness production in nuclear collisions and hadronic interactions