Measurement of Long-range Correlations in pp collisions at $\sqrt{s} = 13$ TeV With ALICE

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**Physics Motivation**

- Long-range correlations in pseudo-rapidity with an azimuthal modulation in small systems show strikingly similar features to those in heavy ion collisions
- Models incorporating initial or final state effects attempt to describe the angular correlations especially for high multiplicity events.
- Experimental challenge to provide techniques and results that could quantify the contributions of initial and final state to the angular correlations

**ALICE Experiment**

Subsystems used in this analysis
- ITS and TPC for Tracking
- $V0$ for multiplicity estimator up to 0-0.01% and Trigger

**The Ridge Yield**

The associated yield has been analyzed with various Leading track selections.
- Even in jetty events, the ridge is clearly seen.
- No clear dependence on the hardness of events within the uncertainties

**Summary**

- The two-particle long-range angular correlations in rapidity has been observed in high multiplicity pp collisions events with ALICE.
- The associated yield has been measured as a function of transverse momentum and compared with CMS results.
- The associated yield has been observed even in jetty events, which may help to understand origin of the ridge whether it comes from final state or initial state effect.