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Probing QGP formation in pp collisions with Balance Functions

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Two particle correlations have shown the presence of long-range rapidity correlations in small collision systems. Several other measurements provided insight into the unexpected collective behaviour similar to the one exhibited in heavy-ion collisions. These properties can be explained by several models, which consider a microscopic description like PYTHIA 8 and a macroscopic treatment as EPOS4. Balance functions have been regarded in the past as a method of investigation the late-stage hadronization found in the presence of a strongly-coupled medium. We present balance functions confronting EPOS 4 and PYTHIA 8 in pp collisions at $\sqrt{s} = 13.6$ TeV to distinguish between these models.

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