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Flow measurements at LHCb

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In heavy-ion collisions, azimuthal correlations probe collective phenomena in the hot and dense medium formed, known as the Quark–Gluon Plasma (QGP). In small collision systems, similar correlations may arise from final-state effects or from initial-state parton correlations. The LHCb experiment has a unique capability to study particle correlations in high-energy hadron collisions at forward rapidity, accessing a kinematic region distinct from other LHC detectors, where longitudinal dynamics play a larger role. By comparing results at forward and backward pseudorapidity, LHCb is also sensitive to possible initial state effects. In addition, thanks to the diverse fixed-target data samples collected by the LHCb experiment, it is possible to study the influence of nuclear geometry on final-state particle correlations by comparing targets with different shapes. This contribution presents recent results on collective flow measurements from the LHCb experiment.

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