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Two-particle correlations with identified pions, kaons and protons in pPb collisions

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Two-particle angular correlations are studied between identified pions, kaons, protons and unidentified charged particles in pPb collisions with an integrated luminosity of approximately 35 nb^{-1} at a nucleon-nucleon center-of-mass energy of 5.02 TeV by the CMS experiment. The particles are identified via their energy loss in the silicon tracker. In order to eliminate short-range correlations we impose a wide $\Delta\eta$ gap of at least two units. The long-range azimuthal correlations are characterized by the second-order (v_2 , elliptic flow) and third-order (v_3 , triangular flow) anisotropy harmonics. The anisotropy harmonics are measured as a function of transverse momentum and wide range of particle multiplicity, which is made possible by the dedicated high-multiplicity triggers implemented in CMS. The new results can help further differentiate between the competing models that aim to explain the origin of the ridge effect.

On behalf of collaboration:

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