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Collective effects in PYTHIA 8 simulations of pp and p-Pb collisions

Measurements of two- and multi-particle azimuthal correlations provide valuable information on the properties of the system created in collisions of hadrons and nuclei at high energy. In particular, they revealed an unexpected collective behaviour in small collision systems similar to the one exhibited by the quark-gluon plasma in heavy-ion collisions. The origin of collectivity in small collision systems is still not understood. In this talk, anisotropic flow coefficients measured using two- and four-particle correlations with various pseudorapidity gaps, per-trigger yields, and balance functions are reported from PYTHIA 8 simulations of pp collisions at $\sqrt{s} = 13.6$ TeV and p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. Comparisons with available experimental data are also presented.

Collaboration / Activity

Institute of Space Science

Primary authors: DOBRIN, Alexandru Florin (Institute of Space Science); MANEA, Alexandru (Institute of Space Science); DANU, Andrea (Institute of Space Science); BRANDIBUR, Diana Catalina (Institute of Space Science)

Presenter: BRANDIBUR, Diana Catalina (Institute of Space Science)

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