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Pion femtoscopy of small systems in ALICE at the LHC

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Femtoscopic correlations carry key information about the size and dynamics of the medium formed by heavy-ion collisions. They provide critical constraints to hydrodynamic predictions of radial flow, and have recently been measured in pp and p-A collisions where the hydrodynamic description is being explored. In particular, models based on hydrodynamics and gluon saturation models provide predictions for system size in p-A collisions. We present new results on femtoscopic correlations, where the treatment of non-femtoscopic background has been greatly improved. The background is relatively large in smaller systems, therefore a careful treatment is essential. We explore two methods; one uses Monte-Carlo models to determine the jet-related background, and the other removes hard events using cuts on the transverse sphericity. We will compare homogeneity radii determined using both methods, and compare our results to data from other heavy-ion experiments.

On behalf of collaboration:

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