

12th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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Charm production in LHCb fixed-target mode

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The novel fixed-target program pioneered by the LHCb experiment during the LHC Run 2 has been upgraded for Run 3 with a dedicated gas injection system, SMOG2. Featuring an improved gas confinement to increase the fixed-target luminosity and a new system that allows the injection of non-noble gases, SMOG2 enables the collection of large samples of pA and PbA fixed-target collisions, including high-statistics samples of charm hadrons. Charm production measurements with SMOG2 provide a unique ability to study and constrain cold nuclear matter effects in small and large collision systems at the same $\sqrt{s_{NN}}$ and also allow to probe the possible onset of hot nuclear matter effects. In this talk, new results of hidden and open charm production using the first data from the new SMOG2 system will be shown. The prospects for charm measurements in PbAr collisions will also be discussed.

Category

Experiment

Collaboration

LHCb

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