

LHCb results on nuclear collisions

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In the last years the LHCb experiment has started to provide novel inputs to heavy ion physics by exploiting some of its unique features. Particle production can be studied in p-p, p-Pb and Pb-Pb collisions at LHC energies for pseudorapidity between 2 and 5, providing measurements which are highly complementary to the other LHC experiments.

The excellent vertexing and particle identification capabilities allow exclusive measurements of open and hidden charm states, including baryons, distinguishing the prompt component from the charm hadrons produced in b decays.

Collisions of LHC beams on fixed targets are also studied using the internal gas target SMOG. Production measurements in this unique kinematic range provide crucial constraints on models of key interest for cosmic ray physics as well as for cold nuclear matter effects. An overview of the LHCb heavy ion program will be given, and selected results will be presented.

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