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## Results from proton-lead and fixed-target collisions at LHCb

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In the last years the LHCb experiment established itself as an important contributor to heavy ion physics by exploiting some of its specific features.

Production of particles, notably heavy flavour states, can be studied in p-p, p-Pb and Pb-Pb collisions at LHC energies in the forward rapidity region (pseudorapidity between 2 and 5), providing measurements which are highly complementary to the other LHC experiments. Moreover, owing to its forward geometry, the detector is also well suited to study fixed-target collisions, obtained by impinging the LHC beams on gas targets with different mass numbers. This configuration allows to study pA collisions at the relatively unexplored scale of  $\sqrt{s_{NN}} \sim 100$  GeV, and can also provide valuable inputs to cosmic ray physics.

An overview of the unique measurements obtained so far by the LHCb ion program will be given, with emphasis on the most recent results.

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