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Fully coherent energy loss effects on light and open heavy-flavour hadrons in pA collisions

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Fully coherent energy loss (FCEL), predicted from first principle QCD calculations, affects the yields of hadrons in proton-nucleus collisions at all energies. The FCEL effects on quarkonia have been successfully compared to existing measurements over the last few years. In this talk, our approach is generalized systematically to $2 \rightarrow 2$ processes allowing for the first computation of FCEL effects on light (h^\pm) and open heavy-flavour (D , B) hadron production in pA collisions at the LHC. Results indicate that significant FCEL effects are to be expected, at mid-rapidity and even more so at forward rapidity, and should be taken into account in the standard nPDF global fit analyses. The FCEL baseline calculations are provided and compared to data whenever available.

References:

F. Arleo and S. Peigné, to appear

F. Arleo, F. Cougoulic, S. Peigné, to appear

Collaboration (if applicable)

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Initial State

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