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Low-x physics at LHCb

Tuesday, 28 March 2023 14:00 (20 minutes)

The LHCb detector's forward geometry provides unprecedented kinematic coverage at low Bjorken-x. LHCb's excellent momentum resolution, vertex reconstruction, and particle identification enable precision measurements at low transverse momentum and high rapidity in proton-lead collisions, probing x as small as 10^-6. In this contribution, we present recent studies of low-x physics using the LHCb detector. These studies include charged hadron, neutral pion, and D0 production in proton-lead collisions, as well as charmonium production in ultraperipheral lead-lead collisions. Future prospects and implications for the understanding of low-x nuclear PDFs and parton saturation are also discussed.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

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