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Haissinski distribution of electron beam in Electron-Ion Collider and its impact on the Hadron beam

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The longitudinal distribution of the electron beam in the electron storage ring of the Electron-Ion Collider will be modified by the machine impedance. The modified distribution, combined with crab cavities may have an impact on the quality of the hadron beam during the collision. In this paper, we will explore the possible impact on the hadron beam quality with strong-strong and weak-strong beam-beam simulations.

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Footnotes

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Yes

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