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Quantum Entanglement Dynamics in Proton-Proton Collisions at Collider Energies

Quantum entanglement has been proposed as the origin of thermalization in proton-proton collisions at the Large Hadron Collider (Phys. Rev. D98, 054007 (2018)). We present results of the entanglement entropy from charged-particle multiplicity data in nucleon-nucleon collisions at collider energies. These are compared with expected values from gluon distribution functions as well as entanglement entropy scaling dynamics (Phys. Rev. D95, 114008 (2017)). Future directions in this study will also be presented.

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