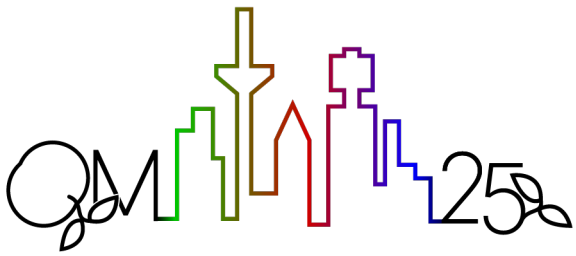

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Initial conditions in the hydrodynamics of small systems and the 3D structure of the nucleon

Motivated by hydrodynamics of small systems we investigate the conceptual problem of how to match hydrodynamics, a classical deterministic theory, to the 3D structure of the nucleon, information encoded in deeply quantum stuctures such as GPDs and TMDs.
We show that concepts from the Wounded nucleon model can nevertheless be applied to such objects provided one assumes instant thermalization, implementable via a detailed balance condition applied to processes that can be used to extract GPDs and TMDs.
We show preliminary results of such calculations, which offer the tantalizing perspective of linking the initial state of hydrodynamics to quantities measureable on the lattice.

Category

Theory

Collaboration (if applicable)

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