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Entropy production and dissipation in spin hydrodynamics

Friday, 13 September 2024 13:30 (20 minutes)

Motivated by the evidence of spin polarization in particles produced by relativistic heavy ion collisions, there is growing interest in the so-called relativistic spin hydrodynamics. In this talk, we will present the outcomes of using first-principle quantum-statistical methods to derive the expression for the entropy production rate in relativistic fluids composed of particles with spin. Based on this, we will discuss our ongoing development of a novel method for deriving various dissipative currents in the system.

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