

Relativistic spin hydrodynamics and spin polarization

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Recent experimental success of detecting the spin polarization of Lambda hyperons in heavy-ion collisions enables us to extract the novel properties of fluid vorticity and spin transport of quark gluon plasma (QGP). These findings motivated the development of a hydrodynamics-like theory for spin polarization and transport. We will discuss the construction of such a theory (the relativistic spin hydrodynamics) and how it can be applied to heavy-ion collisions. We will also discuss possible extension of the spin hydrodynamics to include dilation current.

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