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Holographic energy loss in nonconformal confining theories

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Using the AdS/CFT correspondence, phenomenological models based on five-dimensional Einstein-Dilaton gravity can be constructed which give a realistic description of several non-perturbative properties of Yang-Mills theory at thermal equilibrium. These models can also be used to describe time-dependent and out-of-equilibrium processes, and to compute observables related to heavy quark diffusion and energy-loss in the Quark-Gluon Plasma. In this talk I will discuss quark diffusion and energy-loss in the context of holography, pointing out the main features that emerge in non-conformal models and that can be searched in heavy-ion hydrodynamic simulations.

Summary

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