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From high-energy collisions to hydrodynamics in strongly coupled non-conformal theories

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Ever since fast hydrodynamization has been observed in heavy ion collisions at RHIC, attempts to understand this feature of the very early non-equilbrium stage have been made. We use the gauge/string duality to model the evolution of strongly coupled Quark-Gluon plasma in a non-conformal gauge theory. The non-trivial equation of state and the presence of a time dependent bulk viscosity change the evolution of planar shockwaves. The effect of this non-conformality shows an increase of the relaxation times of the resulting plasma.

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