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A few comparisons between string theory and heavy-ion physics

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String theory—in particular, the gauge-string duality—provides a window into the physics of strongly coupled gauge theories which may be of use in understanding aspects of relativistic heavy ion collisions. Although the supersymmetric gauge theories we understand most clearly via string theory are not QCD, their behavior at finite temperature seems to be similar enough to the deconfined quark-gluon plasma to make meaningful comparisons. Interesting comparisons include thermalization time, energy loss by heavy quarks, and the formation of sonic booms. Momentum diffusion by heavy quarks raises some intriguing puzzles. The string theory computations all hinge on the dynamics of black horizons in a fifth dimension used to characterize energy scales. Although such horizons may seem fanciful, they in fact provide very practical and direct tools for computing dynamical properties of analogs of the quark-gluon plasma. The overall picture is that a few string theory predictions are suggestively close to experimentally favored values, but non-trivial barriers remain to making the predictions more precise.