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Testing Gauge-String Duality with Nuclear Collision Data from RHIC

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Experiments at the Relativistic Heavy Ion Collider have now moved from a discovery phase to a situation in which we would like to understand the properties of the Strongly Interacting Quark Gluon Plasma (sQGP). Many of the measurements made in the study of Relativistic Heavy Ions at high energies are difficult to model, and predictions for many experimentally accessible quantities are often not available, or depend on assumptions that may not hold true. While string theory does not completely alter this situation, the duality between string theory and gauge theories, has provided predictions in a strongly coupled regime. This has given us a new window into the understanding of the experimental findings at RHIC, i.e. a new window into understanding the properties of the sQGP. I will review some of the results from the RHIC experiments, compare them to the predictions from String Theory, and contrast these to the explanations from other types of calculations.