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**Creation and evolution of the deconfined Quark-Gluon matter**

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Recent results from RHIC have shown evidence for the formation of a deconfined quark-gluon phase of nuclear matter produced in relativistic heavy ion collisions. Certain features, such as the apparent low viscosity of the medium, led theorists to describe the phase as a near perfect liquid. The apparent strong coupling in the parton phase was not anticipated in the framework of pQCD and is presently under further investigation through a multitude of new measurements. I will present some of the latest data from RHIC and discuss them in the context of our understanding of phase characteristics such as thermalization, partonic interaction probability and hadronization mechanisms. In relation to future RHIC measurements and heavy ion collisions at the LHC I will introduce new ideas, based on resonance production in jets, to measure chiral symmetry restoration, which is predicted to be one of the fundamental QCD signatures of the phase transition but which has not yet been verified experimentally.