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Study of hot QCD Matter at RHIC and LHC[1]

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Recent results on Quark Gluon Plasma researches from high-energy heavy-ion collisions at RHIC and LHC experiments are reviewed, especially collective phenomena and various correlation studies as well as their relation to the hard processes are presented and discussed to investigate the partonic energy loss, the redistribution of the lost energy in the bulk system and possibly the reheating of the plasma. More recently, small colliding systems such as p-A, d-A, 3He-A collisions and high multiplicity p-p collisions are found to provide various interesting observations, which could be related to collective partonic expansion from high initial density in a small system. Such system size dependences and beam energy dependences would give important and crucial tests to understand the properties of the hot QCD matter: Quark Gluon Plasma.

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