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Relativistic Heavy Ion Theory: Present and Future

CHIHO NONAKA, Nagoya University

The success of theories, hydrodynamic models, recombination models, jet quenching and color glass condensate and so on brought us the fact that the strongly coupled quark-gluon plasma is created at RHIC. Now more detailed investigations from the theoretical side are carried out to know this hot and dense QCD matter at RHIC. I will give a brief overview on recent theoretical achievements for understanding of RHIC physics and also outline interesting topics which arise from recent experimental results and still await a theoretical explanation. I will discuss the expected future of the LHC physics from the point of view of exploration of the QCD phase diagram.