The Phase Diagram of Nuclear Matter

VIDUSHI SHARMA, State Univ of NY- Stony Brook — Quantum Chromodynamics (QCD) at finite temperature and baryon number density has posed unique challenges to theorists, for example, the nature of the phase transition and the location of the critical end point for the phase transition. However, there have been several experiments which explore this regime. The goal of experimental heavy ion physics is to explore and map the higher temperature regions of the phase diagram. The early universe - in the first tens of microseconds following the Big Bang - is believed to have corresponded to this region of the phase diagram, which has since been studied through lattice QCD calculations. This talk will focus on the physics of the critical point of QCD and our continuing pursuit to isolate it.

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