

# STATUS AND EVOLUTION OF THE RHIC FACILITY

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I will review recent successes and plans for the further development of the Relativistic Heavy Ion Collider at Brookhaven National Laboratory. Technological breakthroughs in the application of stochastic cooling to bunched beams provide a short-term path to much higher heavy-ion collision luminosities, which the laboratory is pursuing aggressively, to permit greater focus on rare probes. The development of heavy-ion beams below RHIC injection energy will allow a search for the anticipated QCD critical point in the near future. Continuing improvements in luminosity and beam polarization for proton-proton collisions, together with the upcoming focus on  $\sqrt{s}=500$  GeV operation, fuel improving constraints on the partonic origin of the nucleon spin. Upgrades in progress and proposed for the PHENIX and STAR detectors are essential in helping to quantify the properties of the nearly perfect QCD liquid produced in heavy-ion collisions and of cold nuclei at very high gluon densities. Developments in energy recovery linacs and high-energy electron cooling provide a longer-term path to an electron-ion collider. All of these developments promise a vibrant future for RHIC as a facility dedicated to the laboratory study of condensed strongly interacting matter in a wide variety of forms.