

Abstract Submitted
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Analyzing Data from Beam Halo at RHIC ERIN HODSON, University of Texas, El Paso — The QGP phase transition point is beneath 7.7 GeV. RHIC is incapable of colliding two accelerating ions at such low energy levels. Therefore fixed target collisions are studied to learn more about the QGP phase transition point. A fixed target collision means that accelerating heavy ions from the beam collide with a non-moving target, lowering the momentum exchanged and lowering the energy level of the experiment. A gold plate was installed along the beam pipe at RHIC for the purpose of studying fixed target collisions between the beam halo and the gold plate. However, all previous collisions at RHIC have been between gold ions. Therefore gold must exist within the beam halo if collisions between the beam halo and a fixed gold target along the beam pipe are to provide useful data comparable to previous experiments. The main goal of the project was to determine whether gold existed within the beam halo using Glauber Monte Carlo methods. How the Glauber Model identifies type of ions in collisions will be explained, and data taken from a Single Beam Fixed Target test run at RHIC will be examined. The conclusions reached so far indicate that heavy ions exist within the halo, and the ongoing task is to use Glauber Monte Carlo methods to determine definitively if they are gold ions.

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