

## Improvements of the target lifetime in the RHIC Polarimeter\*

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The Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory (BNL) is the only collider in the world to collide polarized protons. It is critical to the experimental program that the polarization of the proton beam is measured in RHIC. This is accomplished with the Coulomb Nuclear Interference (CNI) polarimeter. The targets used in the RHIC CNI polarimeter are 50 nm thick, 25 mm long and <10  $\mu$ m wide. As the beam intensity in RHIC has increased and the beam size has decreased, the lifetime of these targets has decreased dramatically. During the 2013 polarized proton experimental run, the targets needed to be replaced twice. This resulted in additional work and lost beam time. Before the 2015 experimental run, metal shields were installed around the ends of the targets which greatly improved the target lifetime. The results from the 2015 and plans for the 2017 experimental run will be discussed.

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