

Title:

Observation of the Long-range Beam-beam Effect in RHIC and Plans for compensation

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Abstract:

At large distances the electromagnetic field of a wire is the same as the field produced by a bunch. Such a long-range beam-beam wire compensator was proposed for the LHC, and single beam tests with wire compensators were successfully done in the SPS. RHIC offers the possibility to test the compensation scheme with colliding beams. We report on measurements of beam loss measurements as a function of transverse separation in RHIC at injection, and comparisons with simulations. We present a design for a long-range wire compensator in RHIC.