

RHIC Run24 Preparations

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RHIC schedule, tentative

Key dates	Event
January 8, 2024	Booster on for NSRL
January 28, 2024 through February 4, 2024	AGS Checkout
February 4, 2024	Start AGS setup (with skew quads)
February 11, 2024	Start AGS setup (without skew quads)
February 19 through February 23, 2024	RHIC dry run
March 3, 2024 through September 3, 2024	RHIC run (26 weeks)

RHIC Run Preparations

Lattice development is underway with zero DX shifts (GRD).

- | Investigating a 30 cm * at IP8 to improve luminosity.
- | Lattice development will influence items #2 and 3.

Beam-beam effects with crossing angle simulations (X. Gu and Y. Luo).

- | Preliminary results show significant tune shift suppression from crossing angles.

Dynamic aperture simulations with crossing angle simulations (X. Gu and Y. Luo).

Longitudinal acceptance of RHIC (V. Schoefer).

Injector Preparations to Support RHIC

How to get 3×10^{11} protons/bunch at store?

Two possible scenarios for achieving this

- | Take two pulses from OPPIS with a nominal injector configuration, merging at AGS flattop (long merge, bunch will be 40% longer, excess intensity can afford longitudinal scraping), polarization should be approximately the same as the current configuration.
- | Take a longer pulse from OPPIS, perform a bunch split in Booster, merge at AGS flattop.
- | Either scenario will have the goal of 3.5×10^{11} protons/bunch at AGS extraction.

Skew quads provide an absolute correction of resonances which will improved polarization

- | All magnets received.
- | PS testing is ongoing, delivery TBD.