

RHIC Run24 Preparations

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March 12, 2024

RHIC schedule

Key dates	Event
January 8, 2024	Booster on for NSRL
Week of February 20, 2024	Complete AGS Checkout
February 29, 2024	AGS setup Began
March 18, 2024	approximate cold snake ready
April 1, through April 5, 2024	RHIC dry run
April 15, 2024 through October 7, 2024	RHIC run (25 weeks)

RHIC startup schedule is [here](#), by T. Shrey.

RHIC run schedule is [here](#), by C. Giorgio.

RHIC run webpage is [here](#), by K. Hock.

AGS status

AGS setup status:

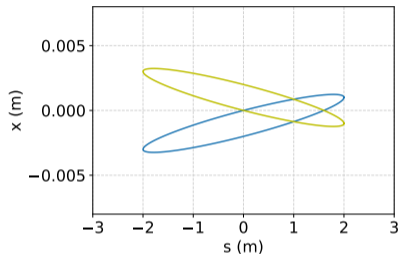
- Standard setup with unpolarized beams completed, 1.8×10^{11} at AGS extraction,
- Setup of split+merge started March 5 and continues,
- Skew quad setup occurs concurrently.

Skew quad commissioning status:

- All magnets installed,
- 6 PS installed with 3 more available and 4 more on site to be tested (13 of 15),
- Verification of skew quad installation being performed with beam,
- Simulations indicate 9 skew quads can be competitive with jump quad setup.

Vernier Scans with Crossing angle

An issue was identified with Vernier scans and crossing angles.



- Implementing a separation bump for a scan shifts the vertex.
- Bump to fully separate beam needs to be larger than in head-on case.
- Longitudinal and horizontal dimensions are coupled.

We plan to develop a Vernier scan model that also accounts for longitudinal distribution. To test:

- Begin run with nominal D0 polarity to support 0 to +2 mrad crossing angles.
 - ▶ insufficient aperture at +2 mrad crossing angle to squeeze.
- Perform Vernier scan at 0 mrad and +0.85 mrad.
- Switch polarity of D0 PS to support -0.85 to -2 mrad crossing angles.
- Polarity swap can be done in 2 hours.