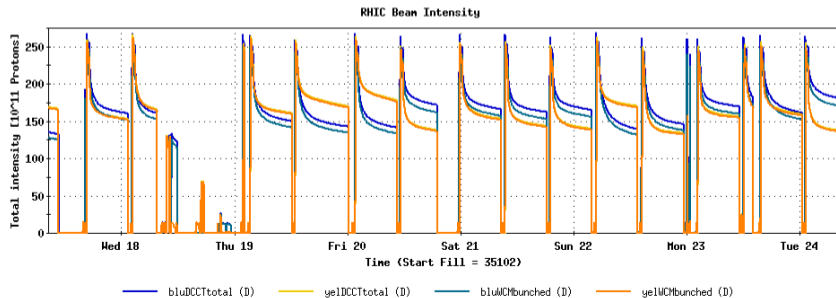
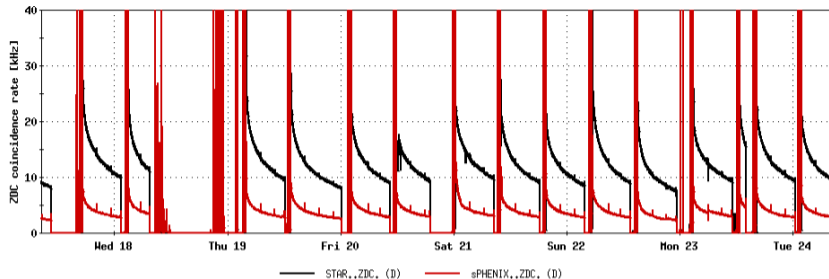


# RHIC Status

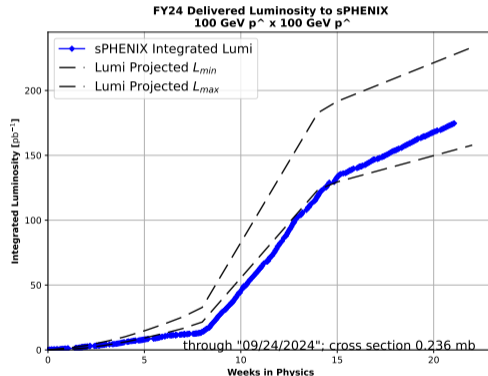
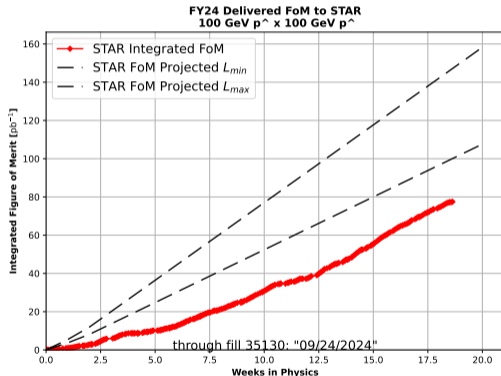
Kiel Hock

# Last Week at RHIC



# RHIC status and Lumi Projections

111x111 physics running since 4/30. Preliminary luminosity accounting



Inflection for sPHENIX projections coincides with change in crossing angle.

# RHIC Status

- Physics running with up to  $2.4 \times 10^{11}$ /bunch at physics and up to 60% polarization.
- sPHENIX MVTX cooling issues has prompted several accesses to investigate, implement a temporary repair and a permanent repair. Resolved on 09/19.
- 9/20 Access to sPHENIX IR to repair a failed switch on an equipment rack.
- 9/21 Elevated sPHENIX backgrounds on 2x stores, resolved with adjusting orbits and collimation.
- 9/22 Access to Booster to repair MW006
- 9/22 Blue QLI at injection due to momentary glitch.
- RHIC status meeting everyday next week.

## Key dates

## Event

April 15, 2024 through September 30, 2024

RHIC polarized proton operations

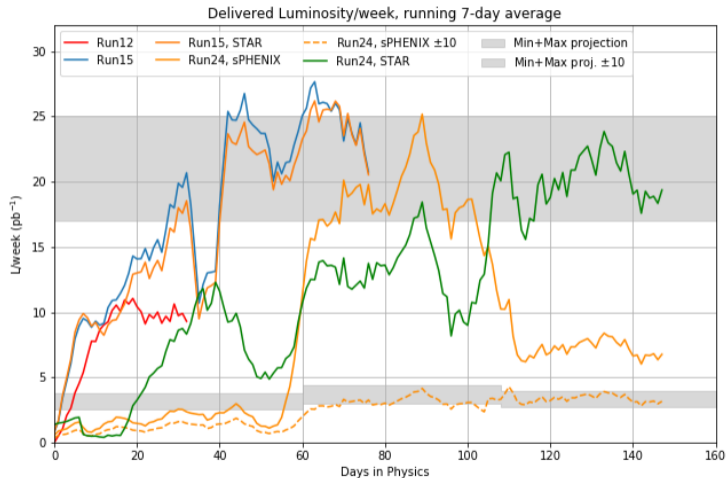
September 30, 2024 through October 21, 2024

RHIC Au operations

October 21, 2024

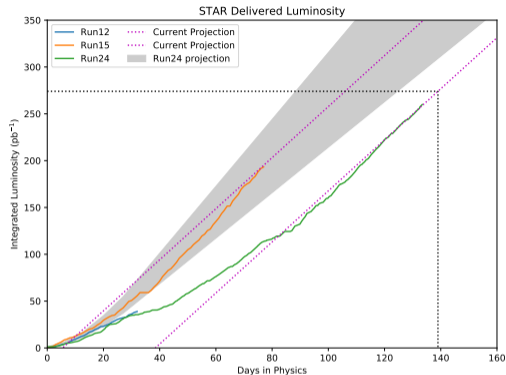
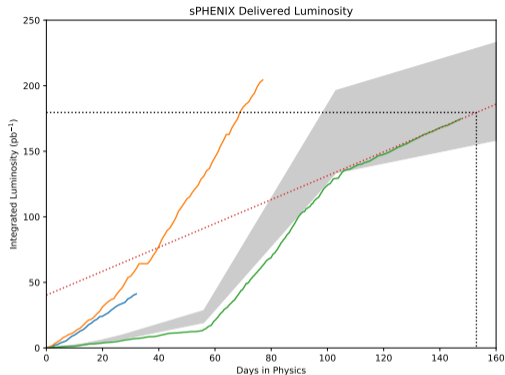
End of RHIC Run24

# RHIC Performance



- Both STAR and sPHENIX are within the minimum and maximum projected window.

# RHIC Performance II

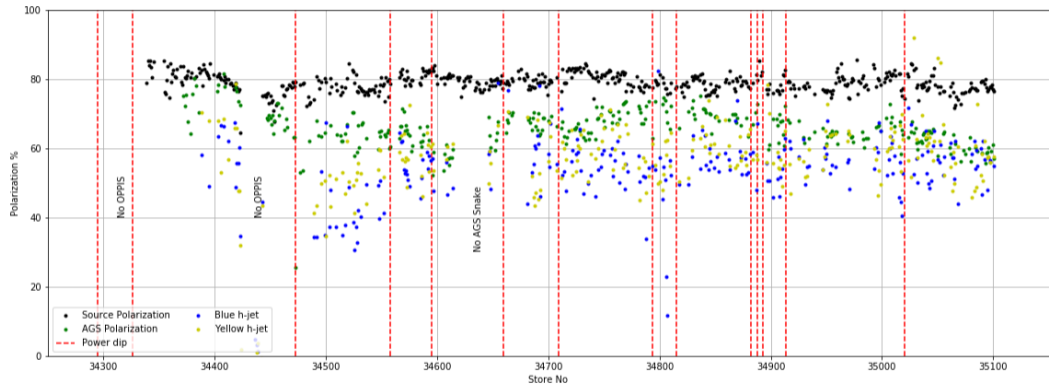


- Projections slightly lower than previous 3 weeks
- STAR projections currently on trend with Run15,  $19.1 \text{ pb}^{-1}/\text{week}$
- sPHENIX projections are currently at  $6.4 \text{ pb}^{-1}/\text{week}$  which is  $\sim 3.2 \text{ pb}^{-1}/\text{week}$  within  $\pm 10 \text{ cm}$

Based on current projections by 9/30:

- STAR will have  $274 \text{ pb}^{-1}$  delivered luminosity and  $\sim 83 \text{ pb}^{-1}$  FOM.
- sPHENIX will have  $179 \text{ pb}^{-1}$  delivered luminosity and  $\sim 54 \text{ pb}^{-1}$  within  $\pm 10 \text{ cm}$ .

# Polarization Performance



Recent drop in source polarization due to excess Rb, recovered slightly. Injector polarization did not rebound.

h-jet values from: <https://www.cnipol.bnl.gov/hjet/run24.html>

cni values from: <https://www.cnipol.bnl.gov/fills/?rp=24&fn=&ft=&be=100&mode=11&sb>Select>

# Au Startup Schedule, tentative

Day(s)	Objective
9/30	Maintenance, injection setup during the evening, RF conditioning overnight
10/1	DX Training+High current shutoff, ramp development during evening, RF conditioning overnight
10/2	rebucket setup and store development, possibly more RF conditioning more development needed
10/3	finish setup and hand store over for experimenter setup
10/4-10/8	ramp up and start setting up stochastic cooling 1 plane/store
10/7+	week of, look to setup 56 MHz (1-4 shifts required)

Start date 9/30.

IR6 and IR8 access available during DX training+High current shutoff

Startup schedule is available [here](#)