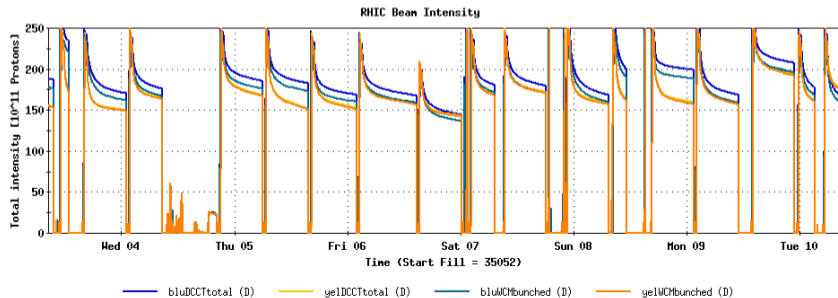
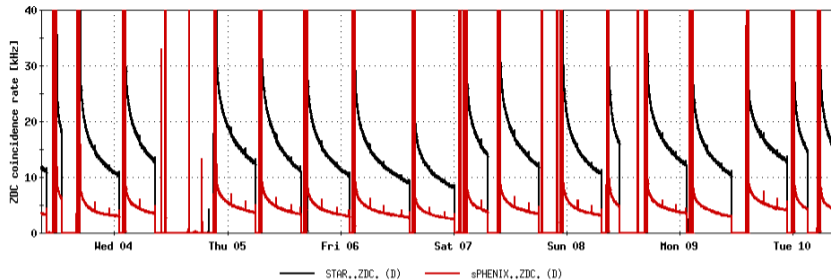


RHIC Status

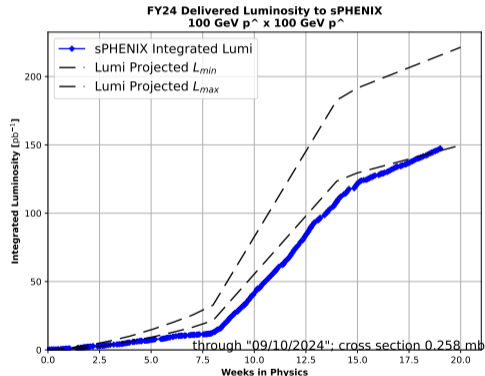
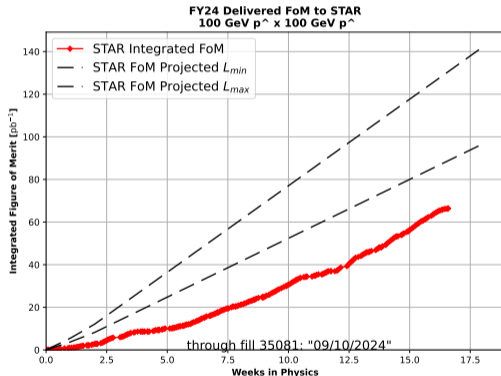
Kiel Hock

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 2.3×10^{11} /bunch at physics and up to 55% polarization.
- OPPIS issues last week caused the Rb to be overfilled resulting in lower polarization.
 - ▶ Found helium valve was not opening fully and was repaired.
- Issues yellow polarization measurements at injection causing permit trips. Switched to new target.
- Several QLIs in blue over the weekend.
- RHIC status meeting switched to Monday, Wednesday, and Friday until switch to Au.

Key dates

Event

April 15, 2024 through September 30, 2024

RHIC polarized proton operations

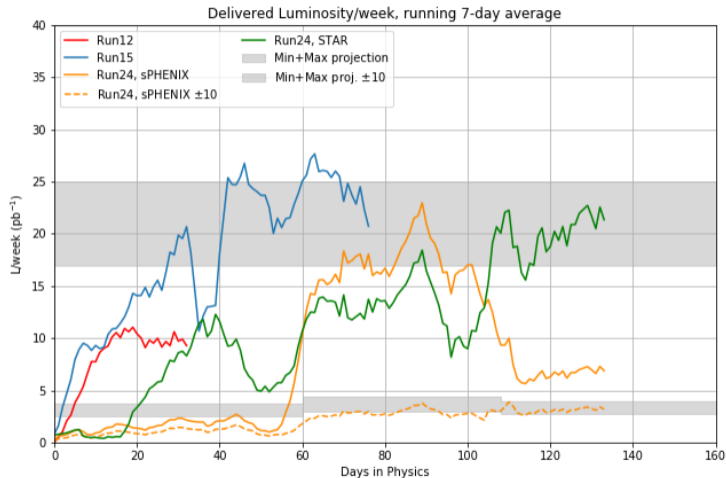
September 30, 2024 through October 21, 2024

RHIC Au operations

October 21, 2024

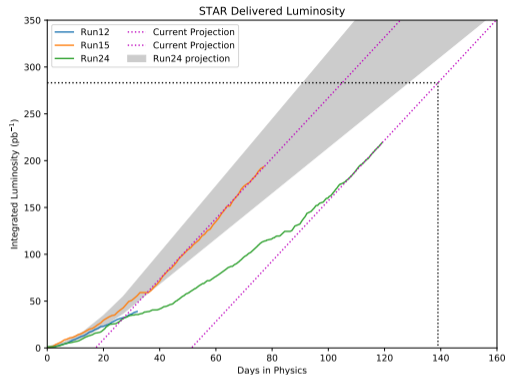
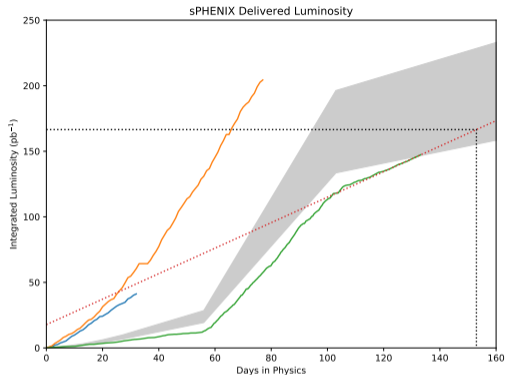
End of RHIC Run24

RHIC Performance



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

RHIC Performance II

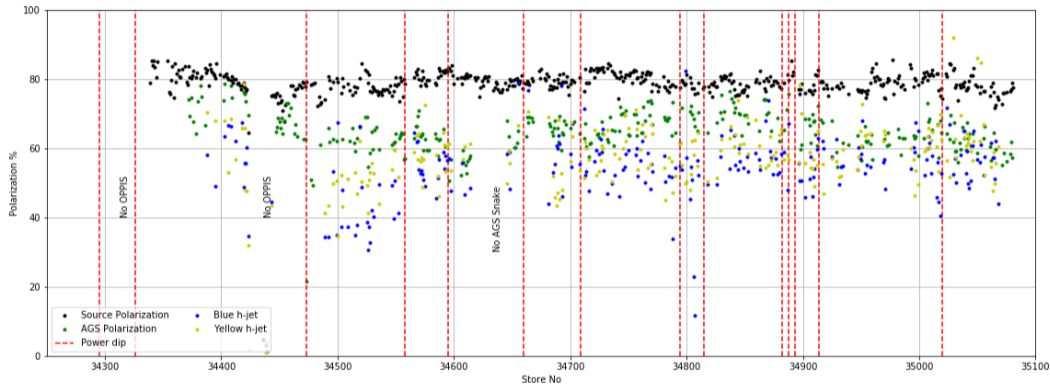


- Projections holding steady over last 3 weeks
- STAR projections currently on trend with Run15, $22.6 \text{ pb}^{-1}/\text{week}$
- sPHENIX projections are currently at $6.8 \text{ pb}^{-1}/\text{week}$ which is $\sim 3.4 \text{ pb}^{-1}/\text{week}$ within $\pm 10 \text{ cm}$

Based on current projections by 9/30:

- STAR will have 283 pb^{-1} delivered luminosity and $\sim 83 \text{ pb}^{-1}$ FOM .
- sPHENIX will have 166 pb^{-1} delivered luminosity and $\sim 50 \text{ pb}^{-1}$ within $\pm 10 \text{ cm}$.

Polarization Performance



From the last 14 stores, $P_{blue, jet}=56\%$, $P_{yellow, jet}=60\%$, $P_{blue, CNI}=48\%$, $P_{yellow, CNI}=51\%$

Recent drop in source polarization due to excess Rb.

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
1	Maintenance +DX training, injection setup during the evening, RF conditioning overnight
2	ramp development during day, RF conditioning overnight
3	rebucket setup and store development, possibly more RF conditioning if we cannot hand over physics store
4	finish setup and hand store over for experimenter setup
5-8	ramp up and start setting up stochastic cooling 1 plane/store
7+	week of, look to setup 56 MHz

Start date 9/30.