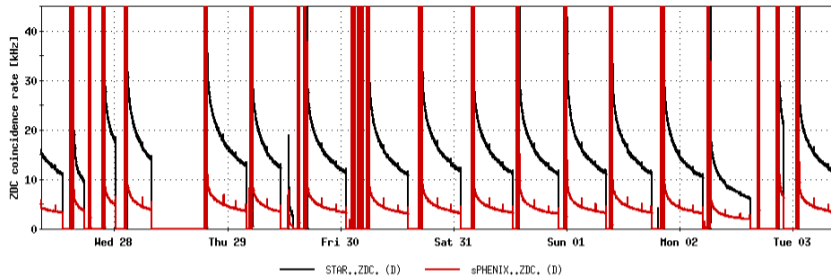


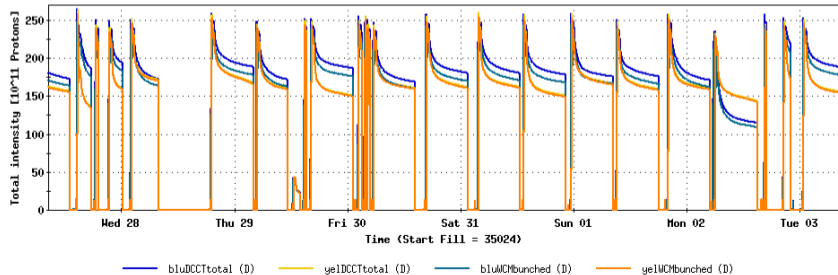
RHIC Status

Kiel Hock

Last Week at RHIC

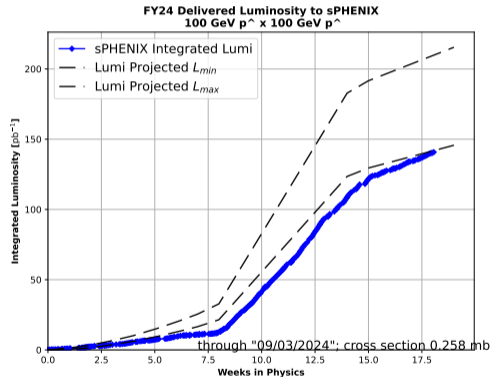
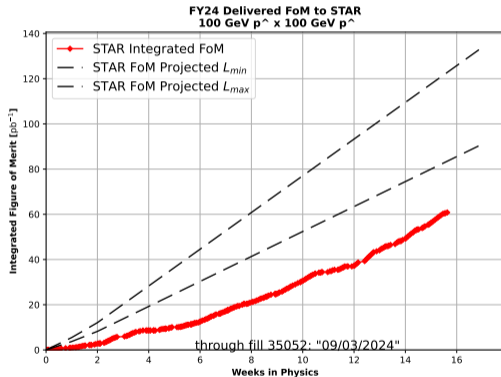


RHIC Bean Intensity



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 55% polarization.
- Several trips of the STAR magnet, repaired
- Maintenance day last week. APEX this week.
- sPHENIX PLC failure required script to be relaunched.
- 4a-bsyn ongoing issues which cause issues with BPM FECs. Still be investigated.
- MD Thursday showed insufficient DA to squeeze both IRs.
- PASS sector 8 A=B error still being investigated.
- Blue injection kicker mod 1 reservoir voltage increased 74 mV to correct a drift.

Two week extension official

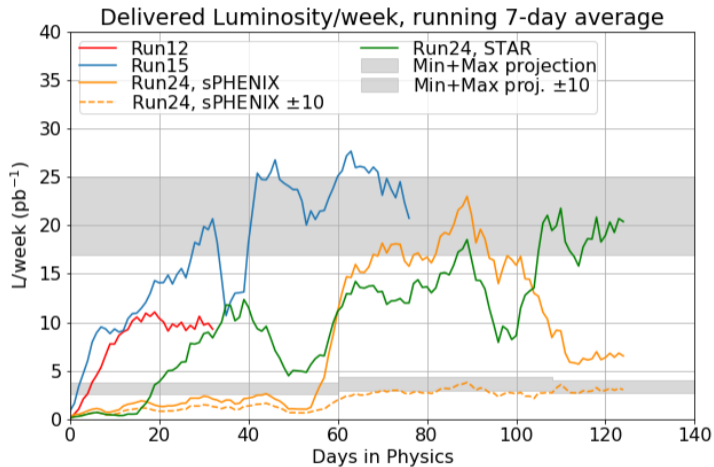
Key dates

April 15, 2024 through September 30, 2024
September 30, 2024 through October 21, 2024
October 21, 2024

Event

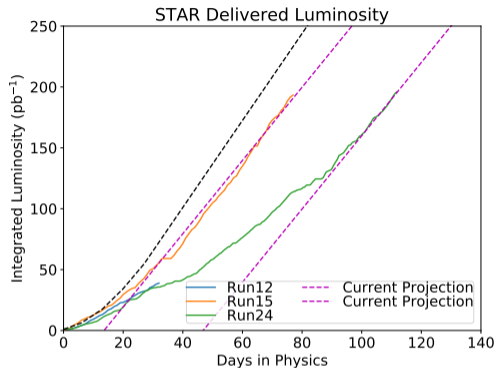
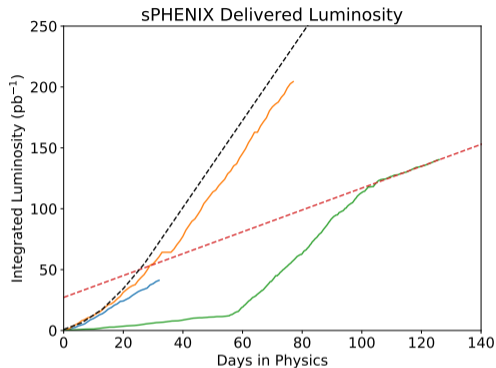
RHIC polarized proton operations
RHIC Au operations
End of RHIC Run24

RHIC Performance



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

RHIC Performance II

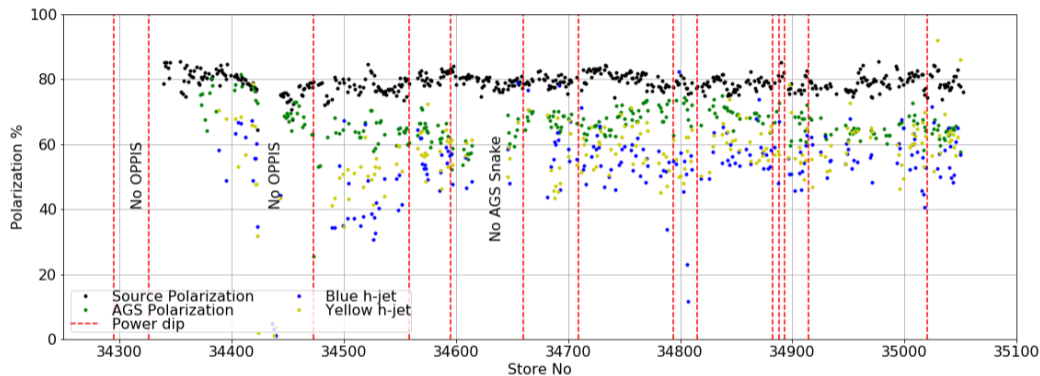


- STAR projections currently on trend with Run15, $22.6 \text{ pb}^{-1}/\text{week}$
- sPHENIX projections are currently at $6.7 \text{ pb}^{-1}/\text{week}$ which is $\sim 3.4 \text{ pb}^{-1}/\text{week}$ within $\pm 10 \text{ cm}$

Based on current projections by 9/30:

- STAR will have 283 pb^{-1} delivered luminosity and $\sim 80 \text{ pb}^{-1}$ FOM .
- sPHENIX will have 166 pb^{-1} delivered luminosity and $\sim 50 \text{ pb}^{-1}$ within $\pm 10 \text{ cm}$.

Polarization Performance



| CNI | Full Run | Last 150 | Last 14 | h-jet | Full Run | Last 150 | Last 14 |
|--------|----------|----------|---------|-------|----------|----------|---------|
| blue | 53.2 | 52.4 | 51.3 | - | 52.3 | 56.5 | 56.6 |
| yellow | 55.8 | 52.9 | 54.8 | - | 56.8 | 60.6 | 60.8 |

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 followed by DX training + RF conditioning |
| 2 | RF conditioning overnight, injection setup during the day |
| 3 | ramp and store development, possibly more RF conditioning if we cannot hand |
| 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 tentatively 9/30.