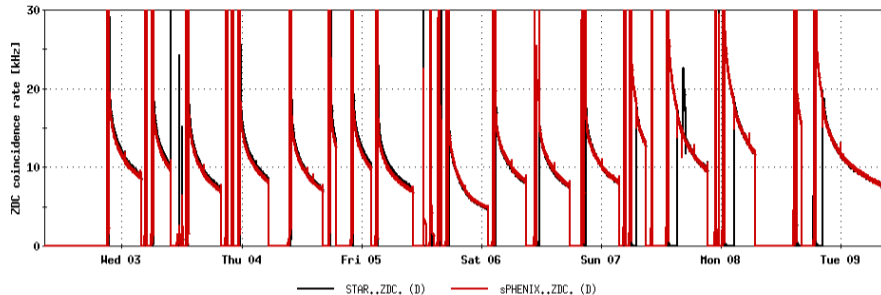


RHIC Status

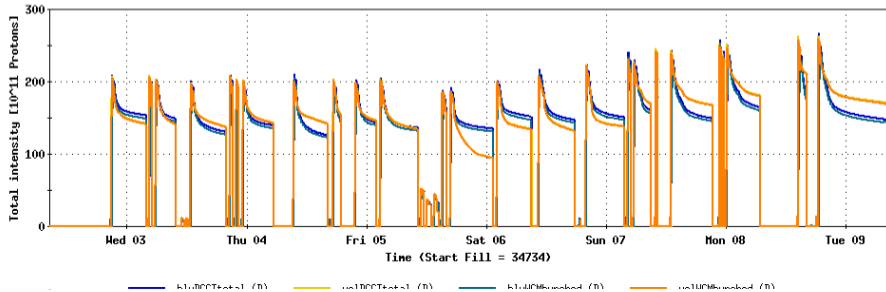
Kiel Hock

July 2, 2024

Last Week at RHIC

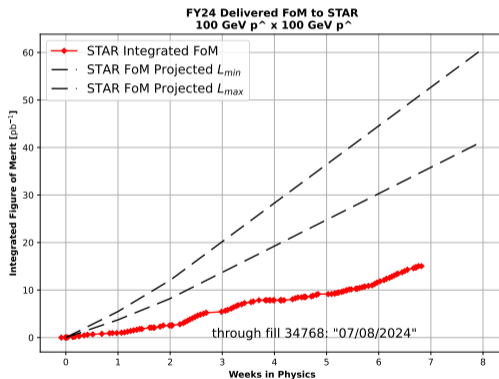
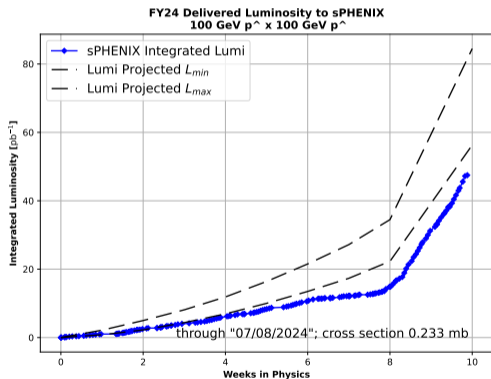


RHIC Bean Intensity



RHIC status and Lumi Projections

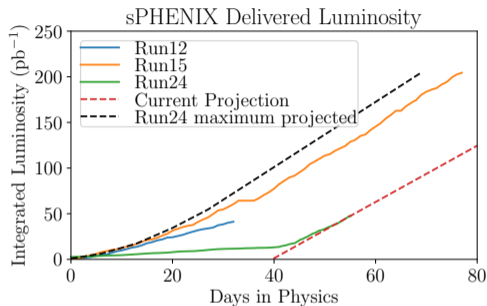
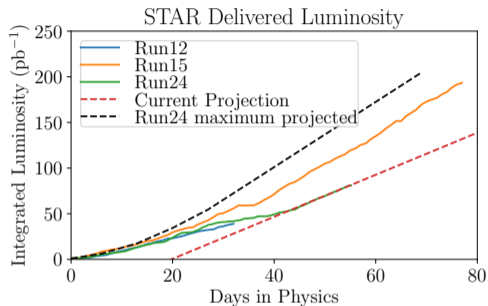
111x111 physics running since 4/30. Preliminary luminosity accounting



RHIC Status

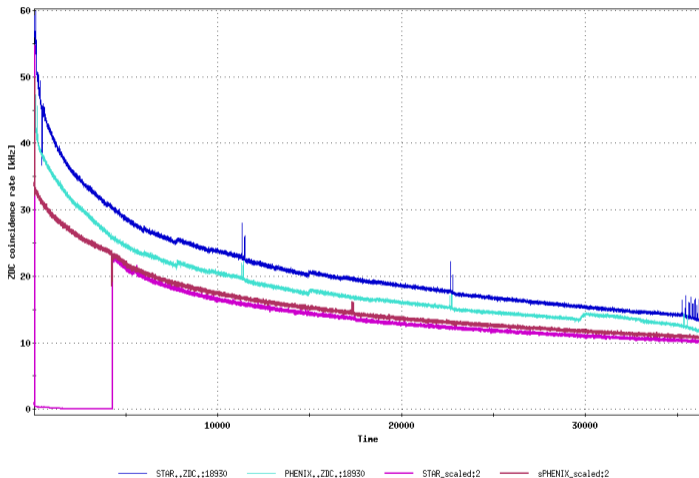
- STAR and sPHENIX operating with 0 mrad crossing angles
- Intensity up to $2.2e11$ at store, currently operating with up to $2.4e11$ at injection
- Delivered polarization is 50-60%.
- STAR and sPHENIX being collapsed at separate times since July 5th
 - ▶ This allows an increase in intensity for sPHENIX and then collapsing STAR for nominal conditions
 - ▶ 6 hour store length following STAR coming into collisions
 - ▶ MD on July 3rd for 2 hours to confirm the mechanics
 - ▶ MD on July 5th for 5 hours to polish setup and make it ready for physics
- Sector 10 lead flow issues caused numerous trips of corrector PS
- Maintenance on 7/2 finished on time and MCR was able to quickly recover and resume Physics

RHIC Performance Outlook



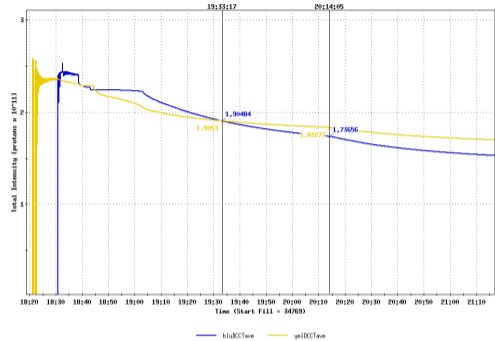
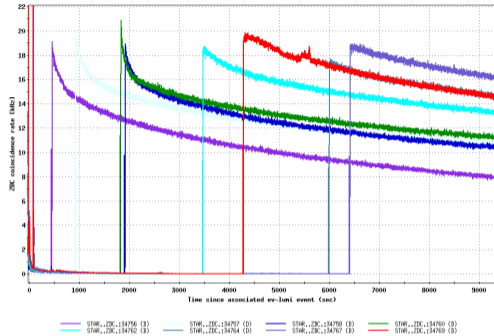
- $L_{max}, L_{min} = 25, 17.0 \text{ pb}^{-1}/\text{week}$
- Current projections $L_{STAR,proj} = 16.1 \text{ pb}^{-1}/\text{week}$, $L_{sPHENIX,proj} = 21.6 \text{ pb}^{-1}/\text{week}$
- Continuing to increase intensity and pushing the collapse of STAR earlier will allow further improvements to luminosity

RHIC Performance Outlook II



- STAR and sPHENIX most recent store compared to best store of Run15.

STAR outlook



- Began collapsing STAR earlier (last store=red line, left plot) at 1h 12m.
- Intensity of last night's store (right), collapsing STAR at 1.9×10^{11} would turn them on 40 minutes earlier.
- Will work to collapse STAR earlier