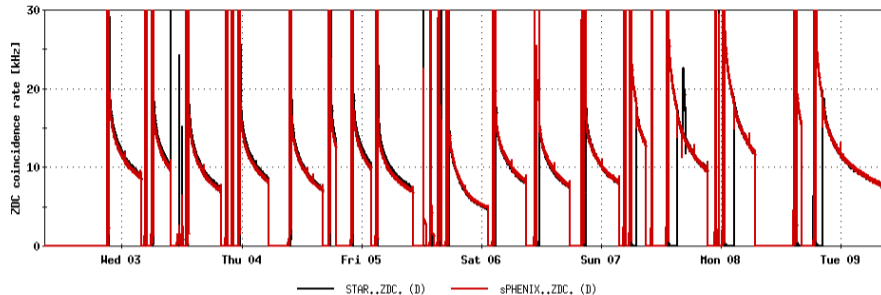


RHIC Status

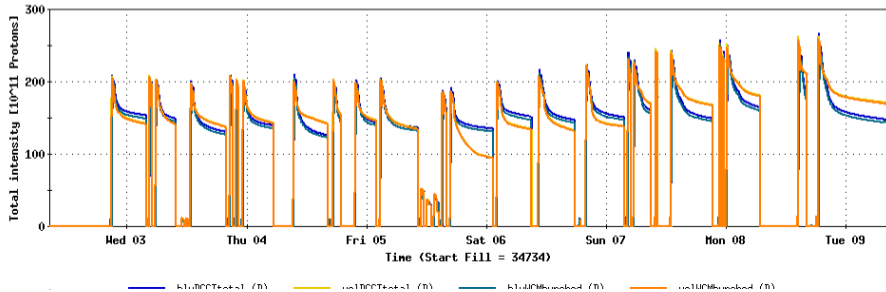
Kiel Hock

July 2, 2024

Last Week at RHIC

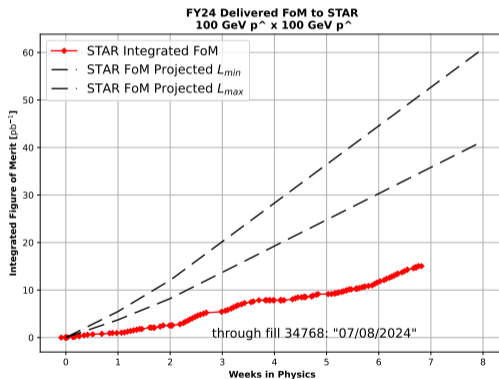
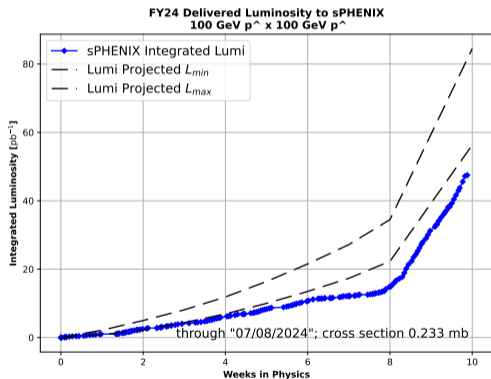


RHIC Bean Intensity



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 2.2×10^{11} at store, currently operating with up to 2.4×10^{11} at injection

Delivered polarization is 50-60%.

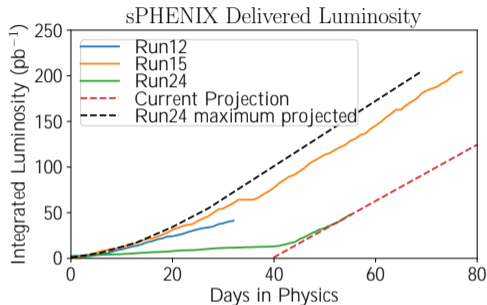
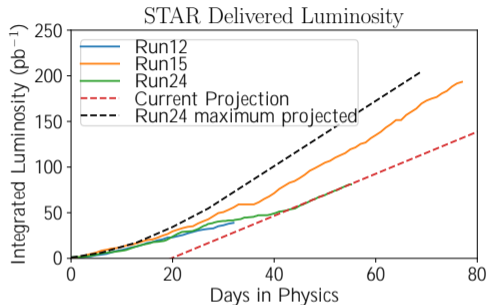
STAR and sPHENIX being collapsed at separate times since July 5th

- ▶ 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

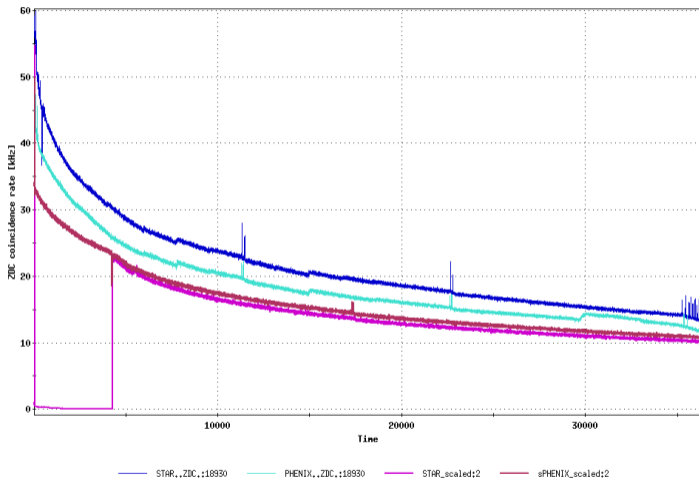
Maintenance on 7/2 finished on time and MCR was able to quickly recover and resume Physics

RHIC Performance Outlook



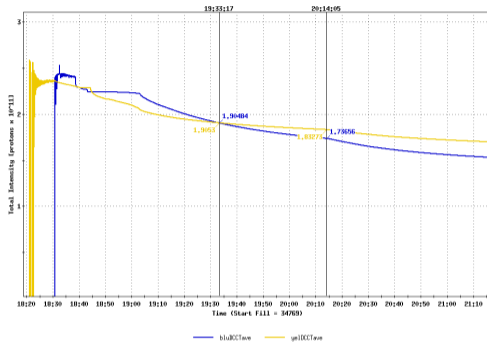
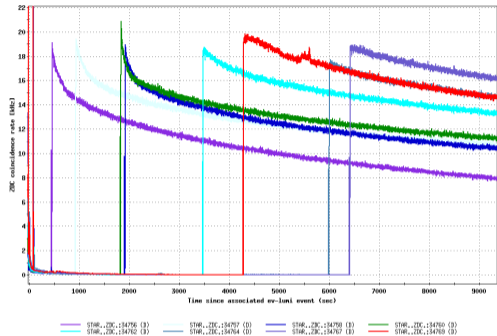
- $L_{max}, L_{min} = 25, 17.0 \text{ pb}^{-1}/\text{week}$
- Current projections $L_{STAR,proj} = 16.1 \text{ pb}^{-1}/\text{week}$, $L_{sPHENIX,proj} = 21.6 \text{ pb}^{-1}/\text{week}$
- Continuing to increase intensity and pushing the collapse of STAR earlier will allow further improvements to luminosity

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