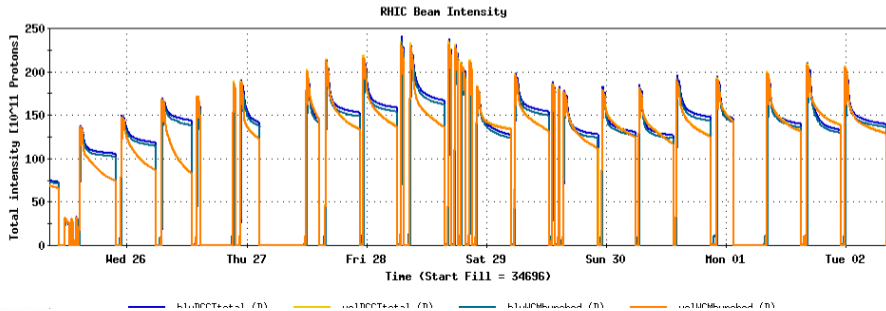
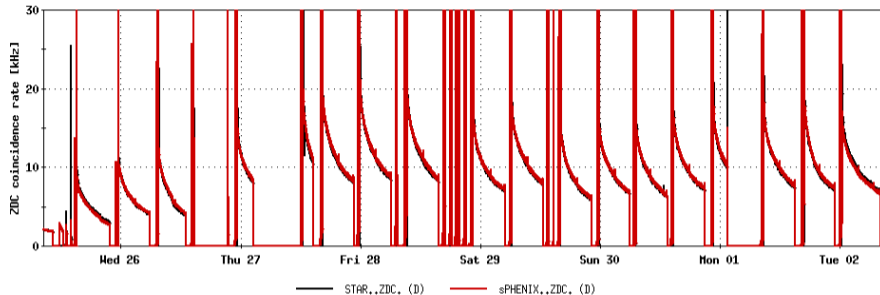


RHIC Status

Kiel Hock

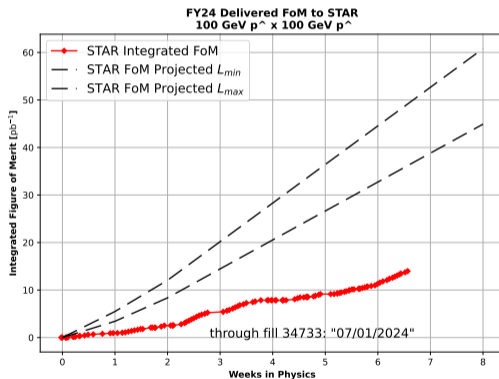
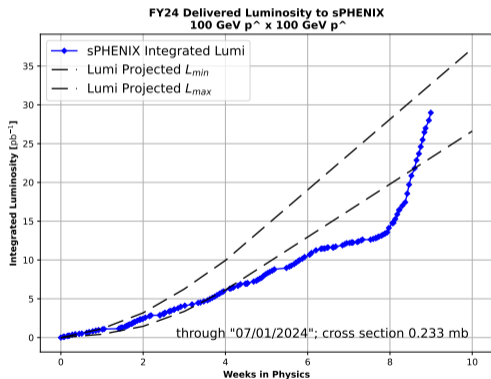
July 2, 2024

Last Week at RHIC



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 2.0×10^{11} at store, currently operating with $1.7-1.8 \times 10^{11}$ at injection

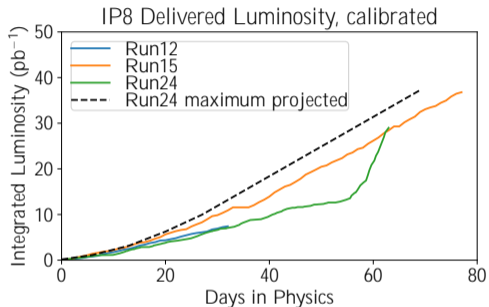
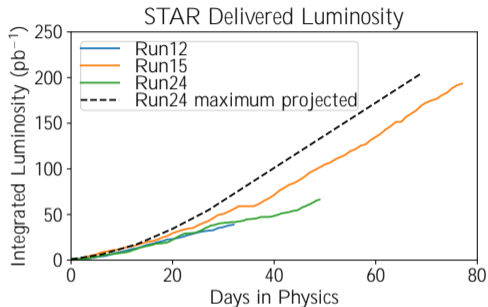
Delivered polarization is 50-60% with improvements made to yellow polarization lifetime (reported last week) by separating Qv from 7/10 snake resonance.

June 25 Machine Development successfully tested a separate storage ramp to collapse IP6 and IP8 independently. Machinery has been further refined with additional MD tomorrow

Power dip on June 27

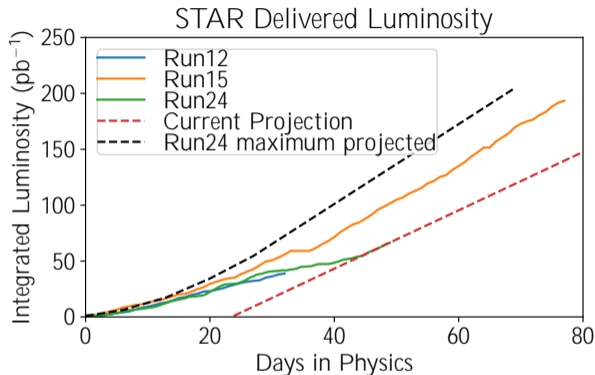
2x lead flow trips in alcove 10c due to bad current driver board on June 26+27

Comparison with previous runs



Run15 and Run12 scaled based off of nominal emittances and calculated crossing angle
IP8 goal scaled based off expectation of a crossing angle. Current increase from head-on
increases the current performance

RHIC Performance Outlook



Current projection corresponds to 18.3 pb^{-1} delivered/week where $L_{max}, L_{min} = 25, 17.0 \text{ pb}^{-1}/\text{week}$

Exceeding $18.3 \text{ pb}^{-1}/\text{week}$ will require one IR operating with a crossing angle, beta-squeezing, or the implementation of Lumi sharing