

RHIC Status Time Meeting

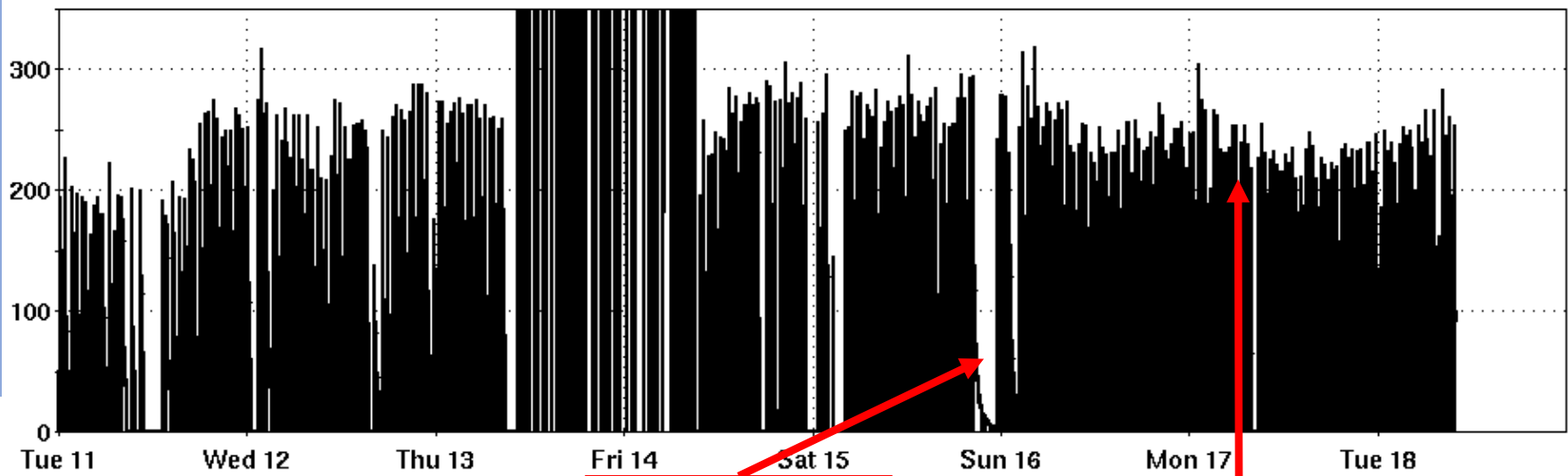
V. Schoefer (for C. Liu)

2/18/2020

RHIC Status

- Switch to 5.75 GeV/N very smooth
 - Emittance and peak rates sensitive to the tunes in a way consistent with a fast space charge blowup at injection
- Fixed target at 5.75/N finished in 24 hrs
 - Ends the planned fixed target program
- Uptime mostly very good
 - Interruption for AGS RF p.s. and smoke detector problem
- Performance notes
 - Average lumi declining over weekend
 - TTB controller issue
 - BtA foil efficiency
 - RHIC injection and store tunes

STAR Event Rate [Hz]

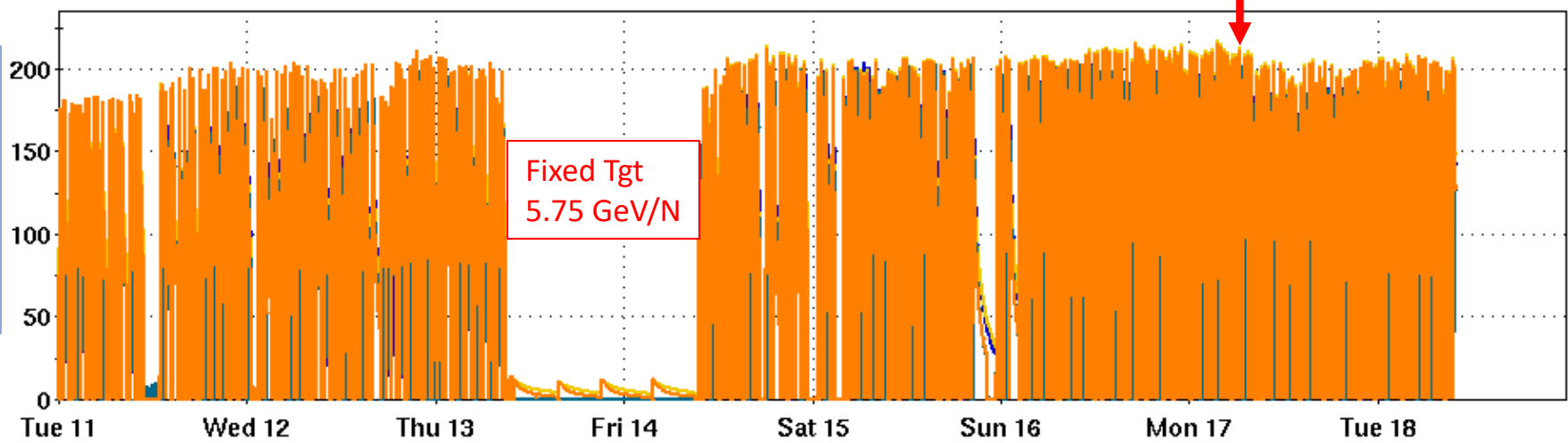


AGS RF +smoke det. te (D)

Intensity drop and emittance increase

RHIC Beam Intensity

Intensity [1e9]

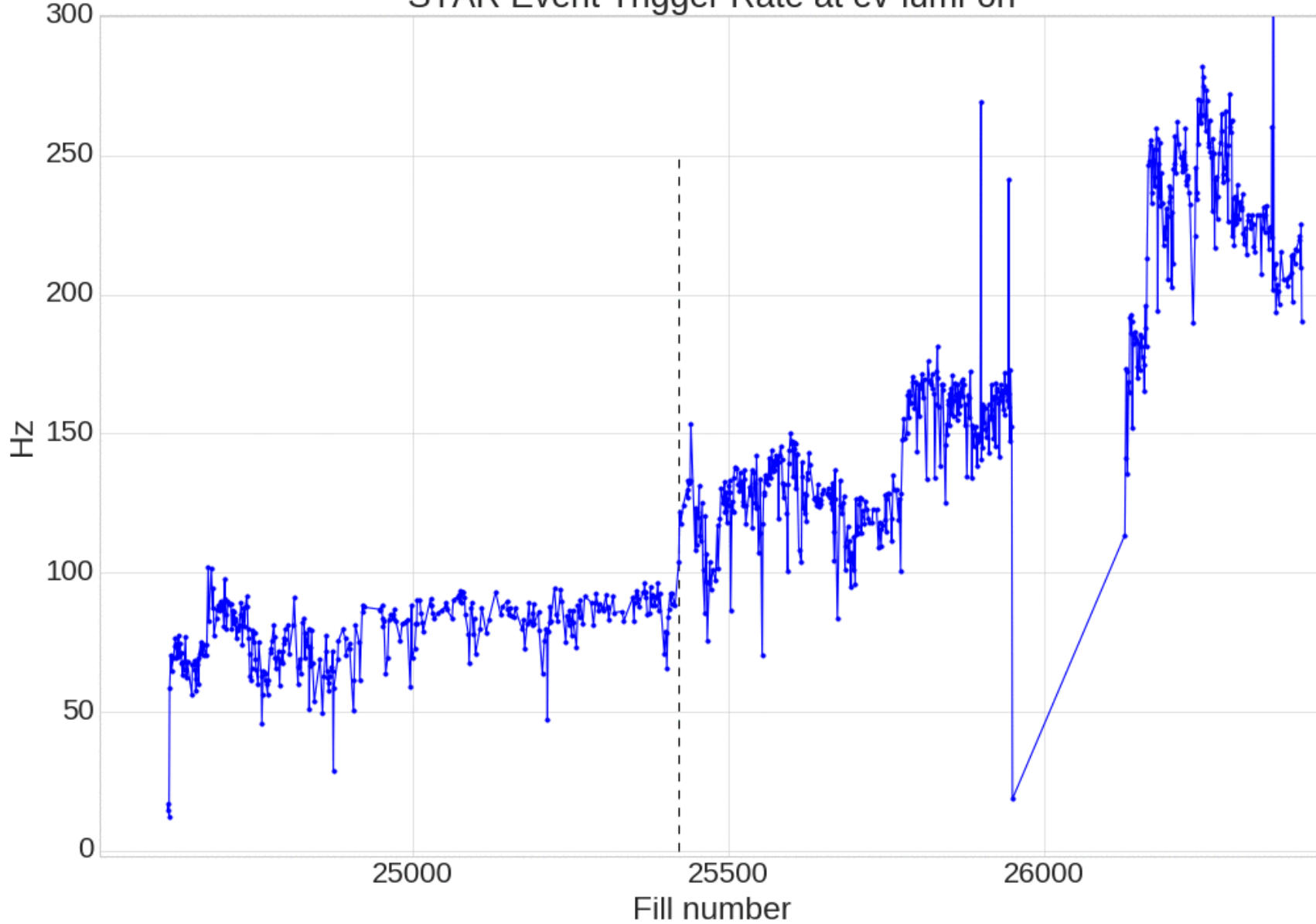


Fixed Tgt
5.75 GeV/N

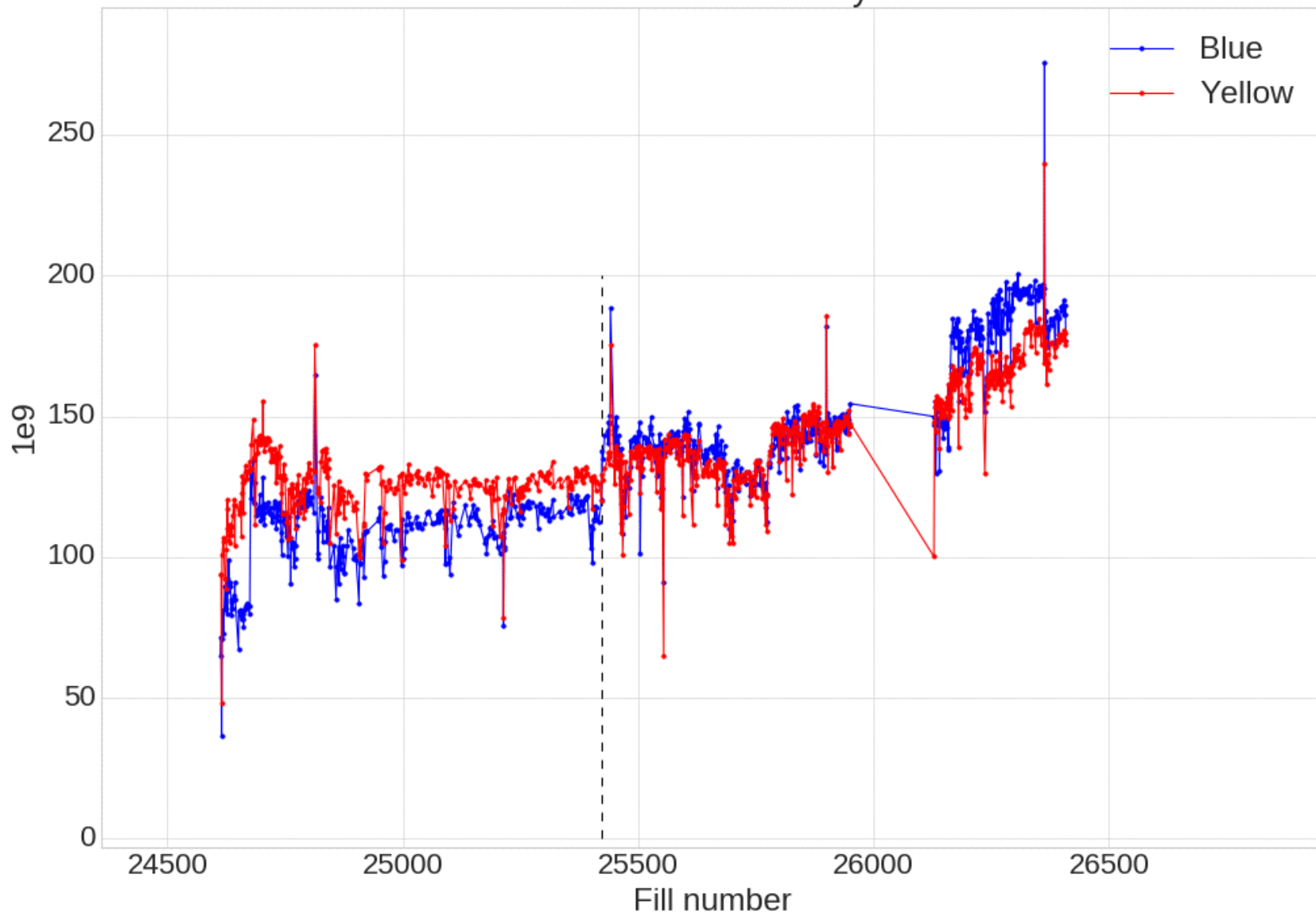
Time (Start Fill = 26140)

bluDCCTtotal (D) yelDCCTtotal (D) bluWCMbunched (D) yelWCMbunched (D)

STAR Event Trigger Rate at ev-lumi-on

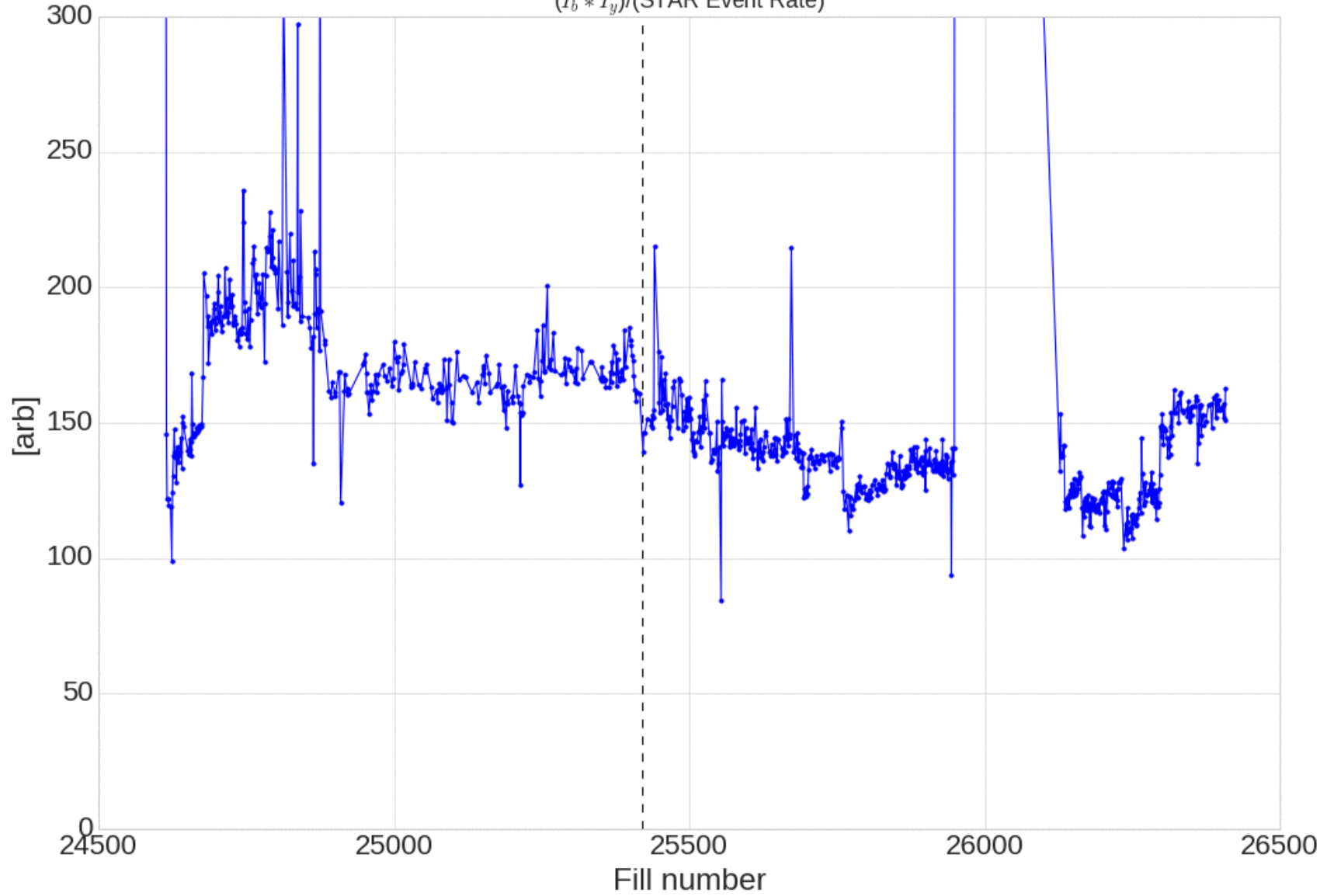


Peak WCM Intensity



"Emittance" at lumi-on

$$(I_b * I_y) / (\text{STAR Event Rate})$$



Next up..

- Maintenance Wed
- Try to maintain peak performance to end 5.75 GeV/N on Monday
- Brief interruptions Thu/Fri to turn on CeC magnets and compensate effect on RHIC beam
- Begin 4.6 GeV/N run with cooling as soon as possible