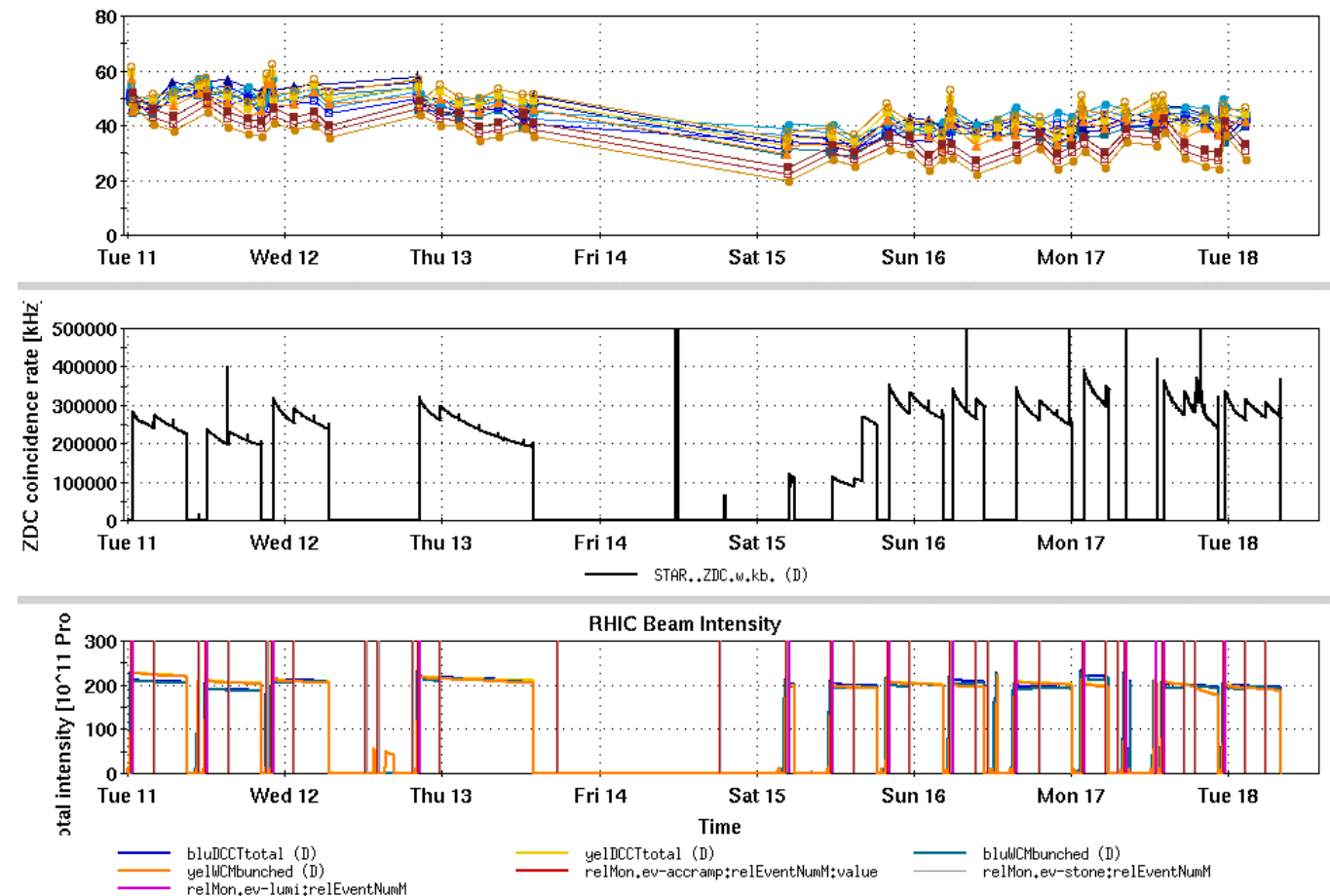


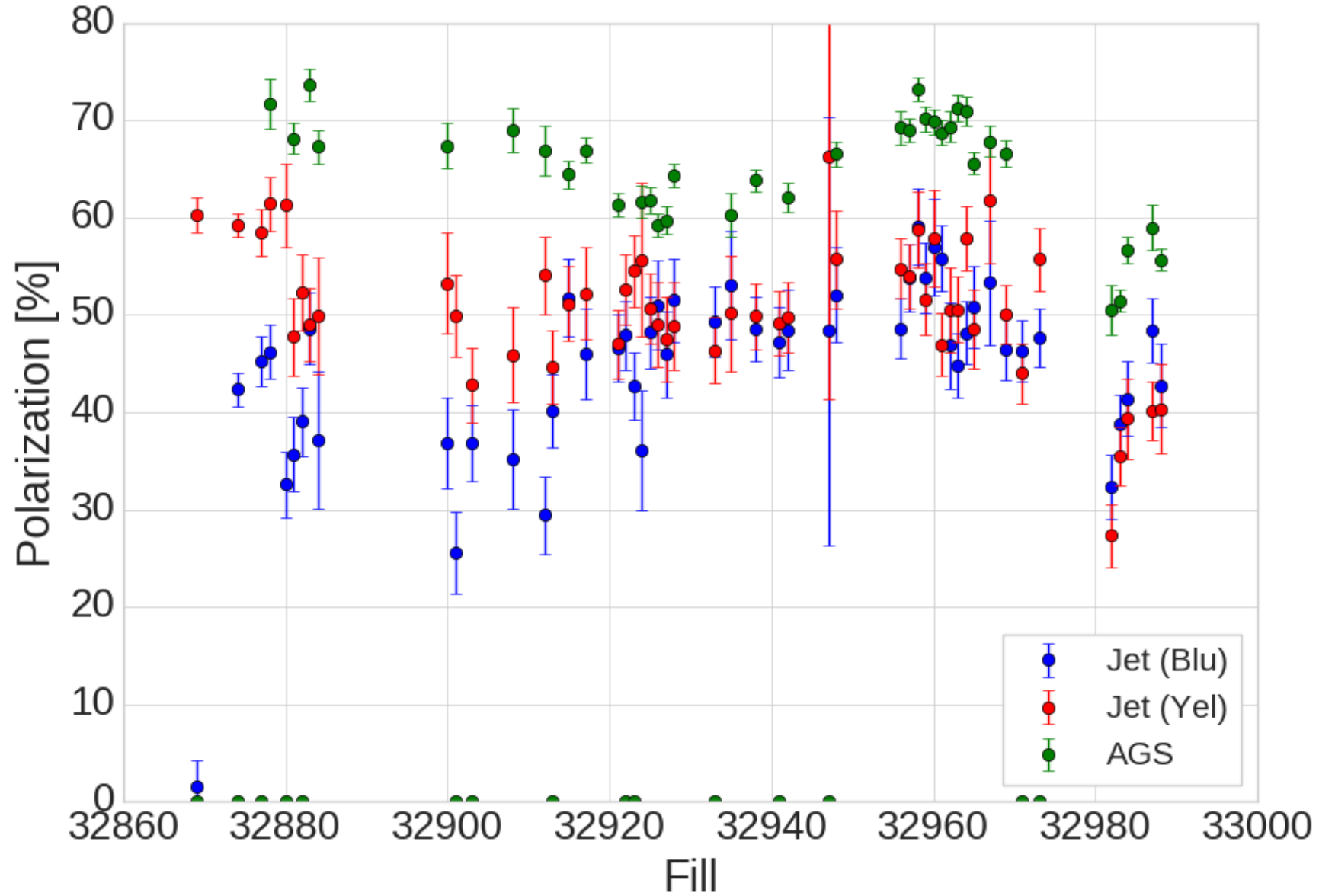
# RHIC Run 22 Run Status

1/18/2022

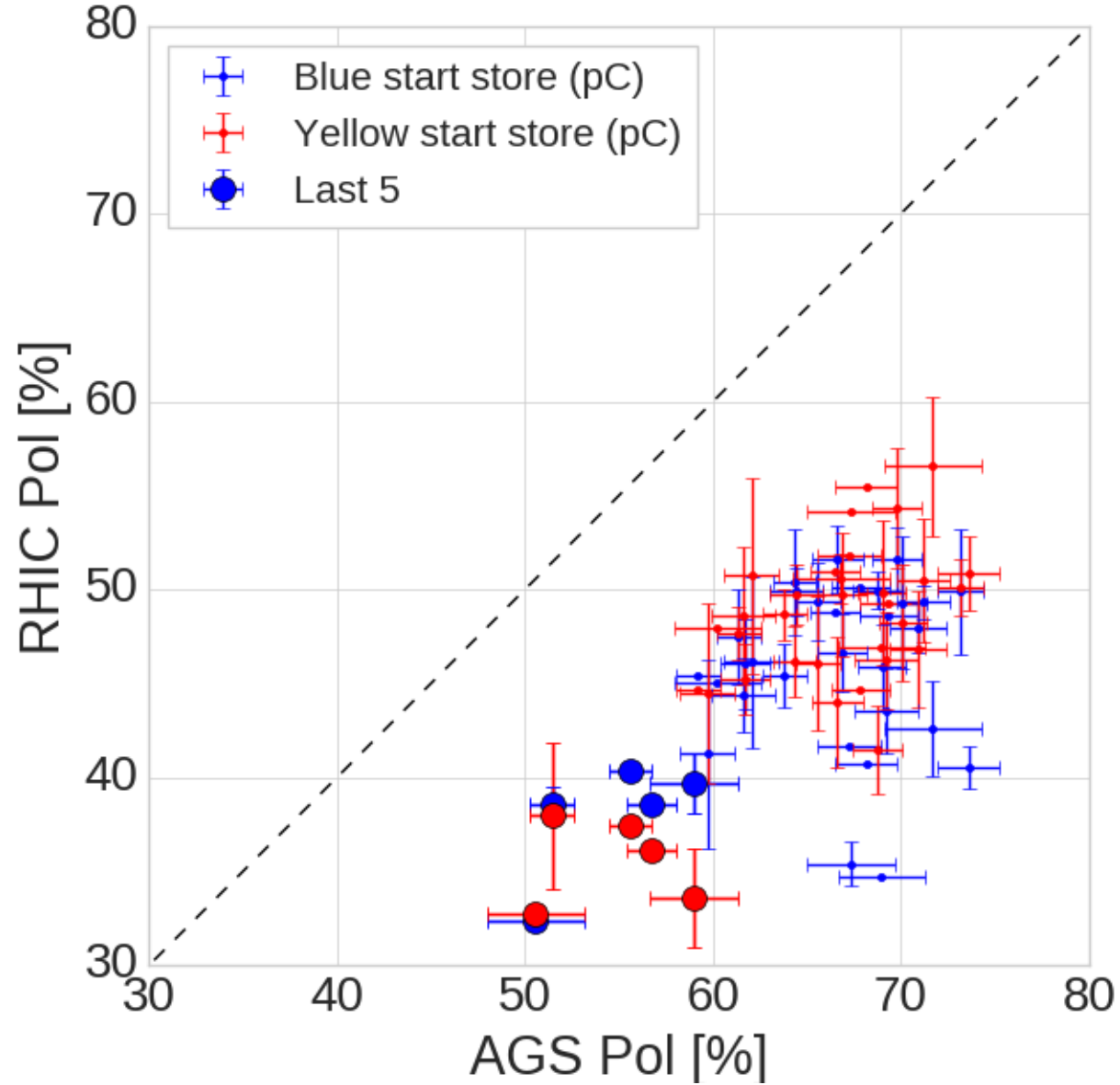
- AGS Siemens motor generator failed evening Wed Jan 12
  - Investigation of the extent of the equipment damage continues
  - Switch to Westinghouse motor generator
    - Beam back at AGS extraction evening of Jan 14, RHIC stores back by morning of Jan 15.
    - Factor of 2 slower ramp rate
- Polarization with Westinghouse:
  - AGS 56%, without tune jump quads
    - At  $2.2 \times 10^{11}$  per bunch
  - RHIC: low 40%'s
- Rotator based check of stable spin direction at STAR planned for Thursday.



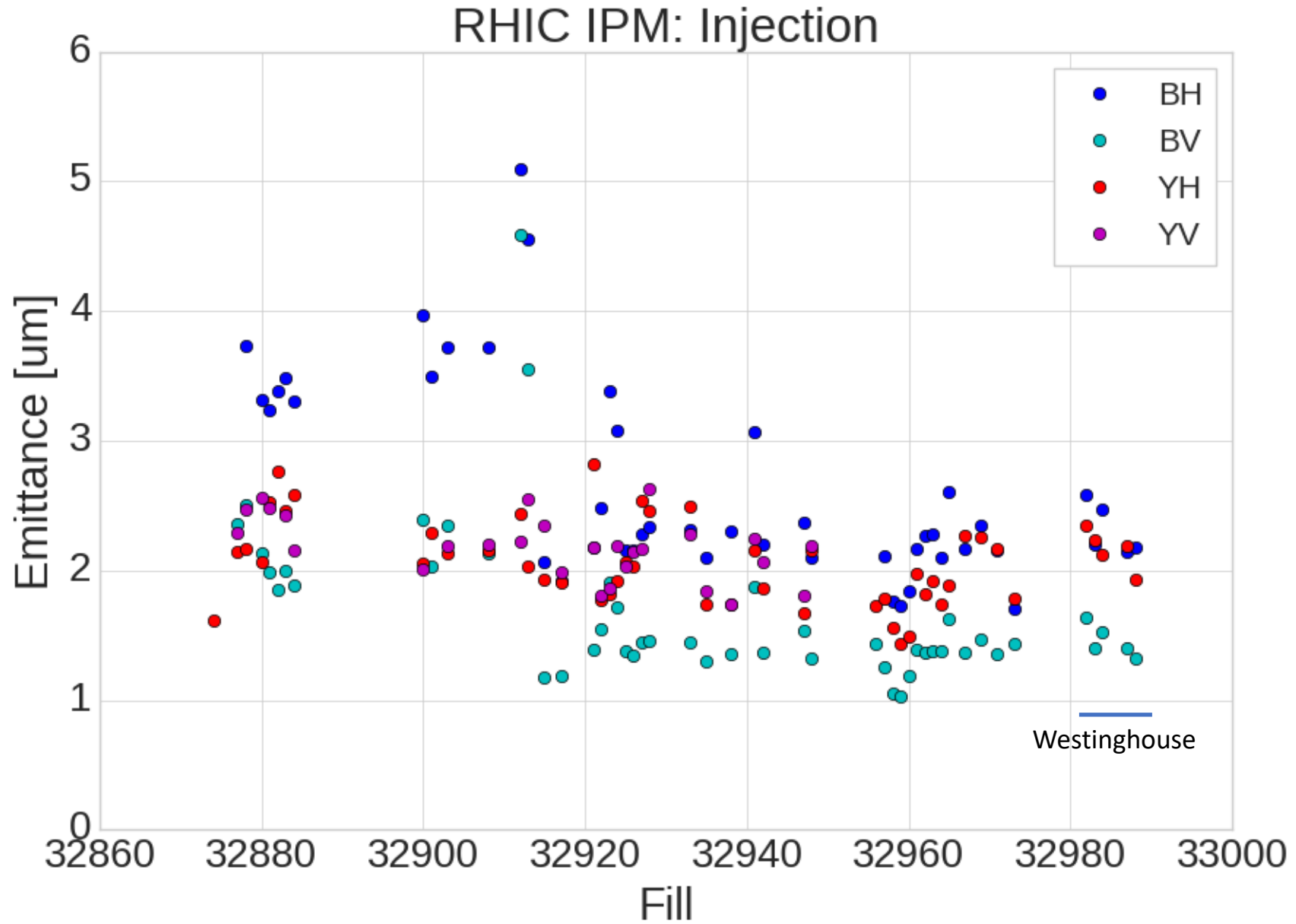
# RHIC and AGS polarization (by fill)



# RHIC and AGS polarization



# RHIC Injection emittance



# Assessment and plans

- Westinghouse last used for pol. protons in Run 13
  - At the time 2-3% relative drop in polarization at  $1 \times 10^{11}$
  - Jump quads *more* important at lower acceleration rate
    - Relative gain factor for polarization 1.15 instead of 1.1
    - Needs power supply work to accommodate long function
    - Priority is to get good jump quad functioning today
- Activities for polarization development
  - Test ramp without tune meter excitation (today - emittance improvement? Polarization?)
  - Ramp orbit imperfection tests (RHIC polarization transmission)
- Still need to do other tasks (in addition to polarization recovery):
  - Rotator check of STAR spin direction (tomorrow, Wed 1/19)
  - AGS Au setup (Friday 1/21, 0800-2000)
  - Low luminosity stores for STAR calibrations (tentatively this weekend).