

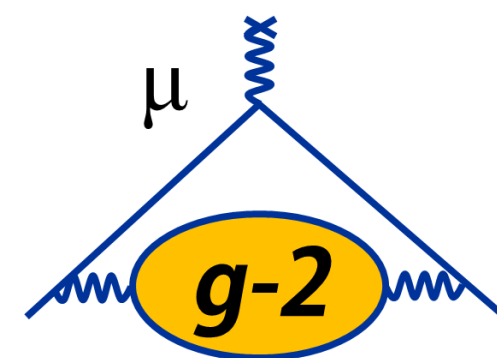


# Muon g-2 Update

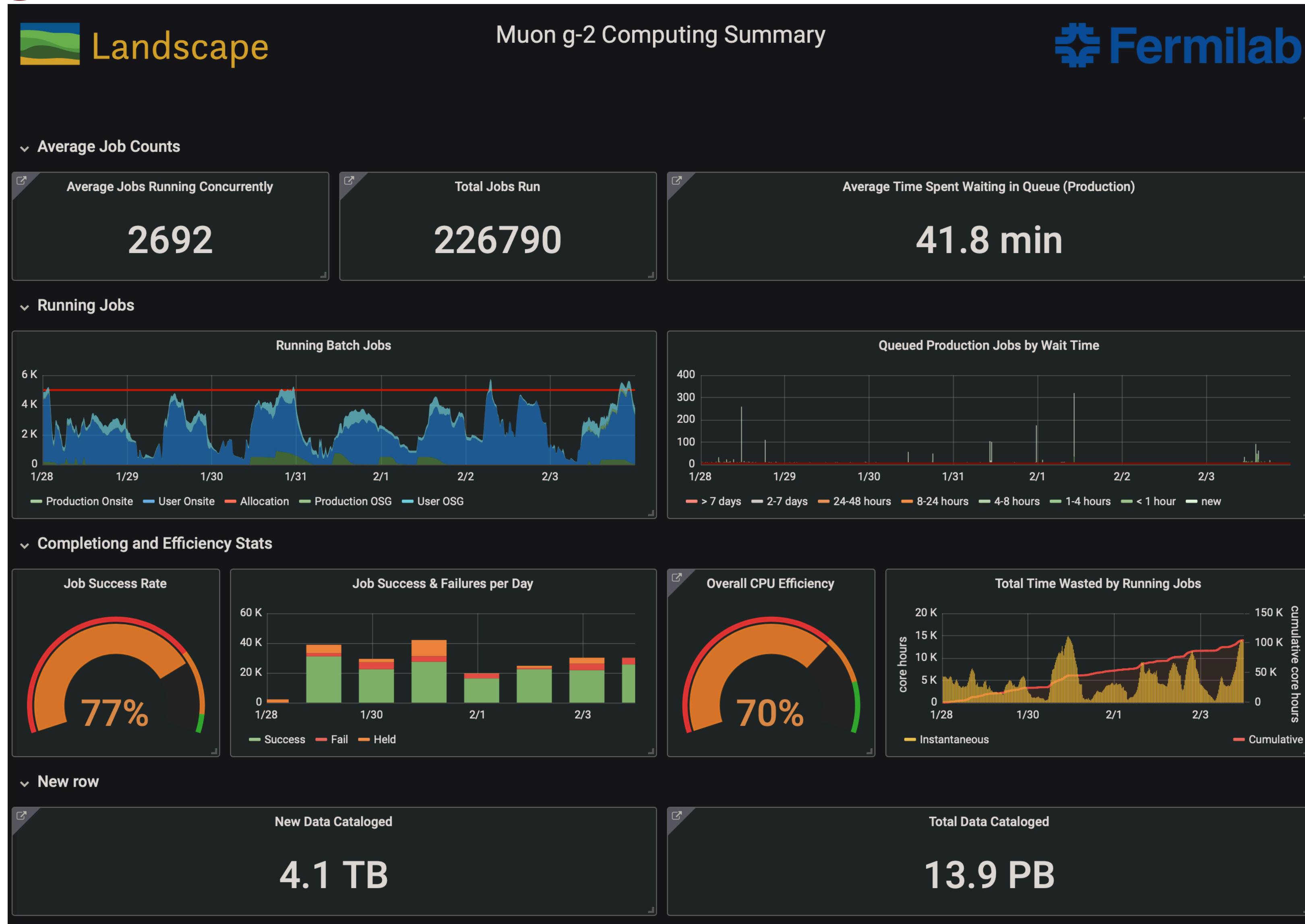
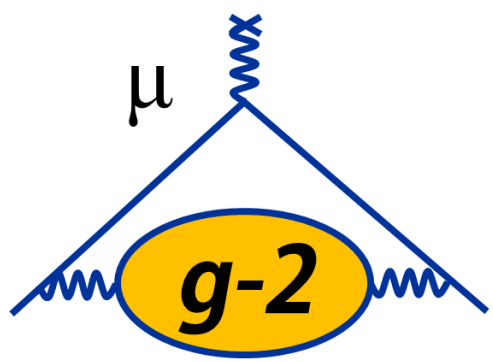
David Flay, Operations Manager

Proton PMG Meeting

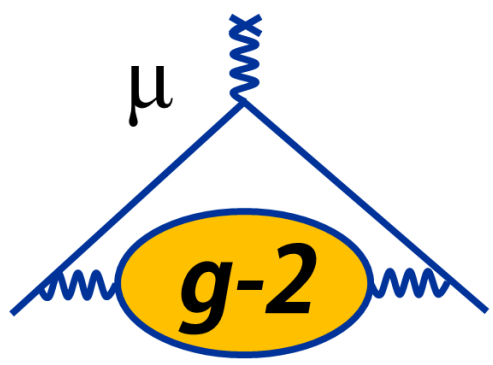
6 February 2020



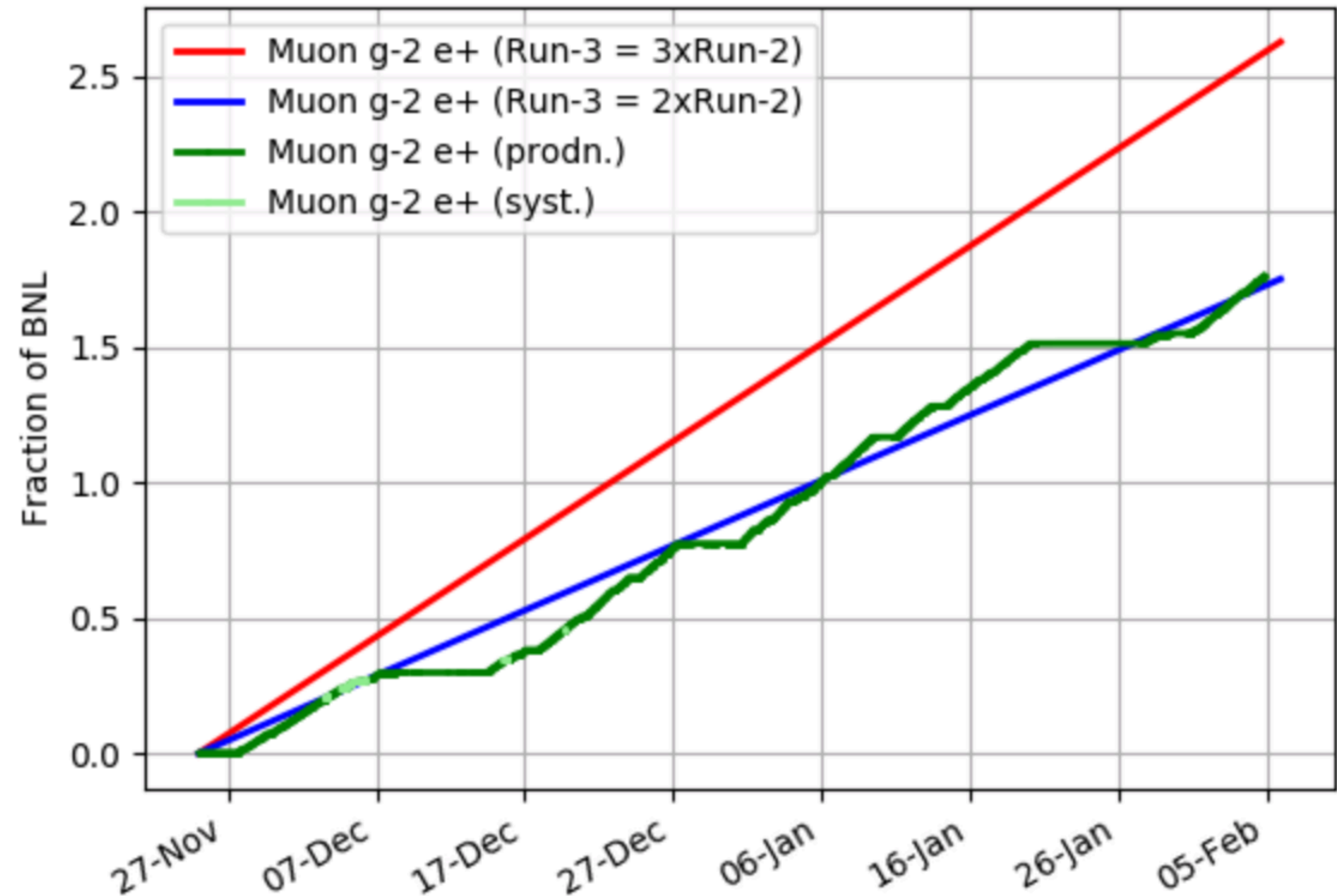
# Computing Status



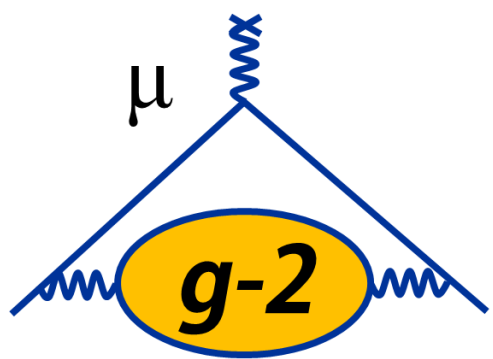
# Highlights Since December 2019



- **Production running** from Nov 22—Dec 7
  - 5.5% increase in integrated muons from AD



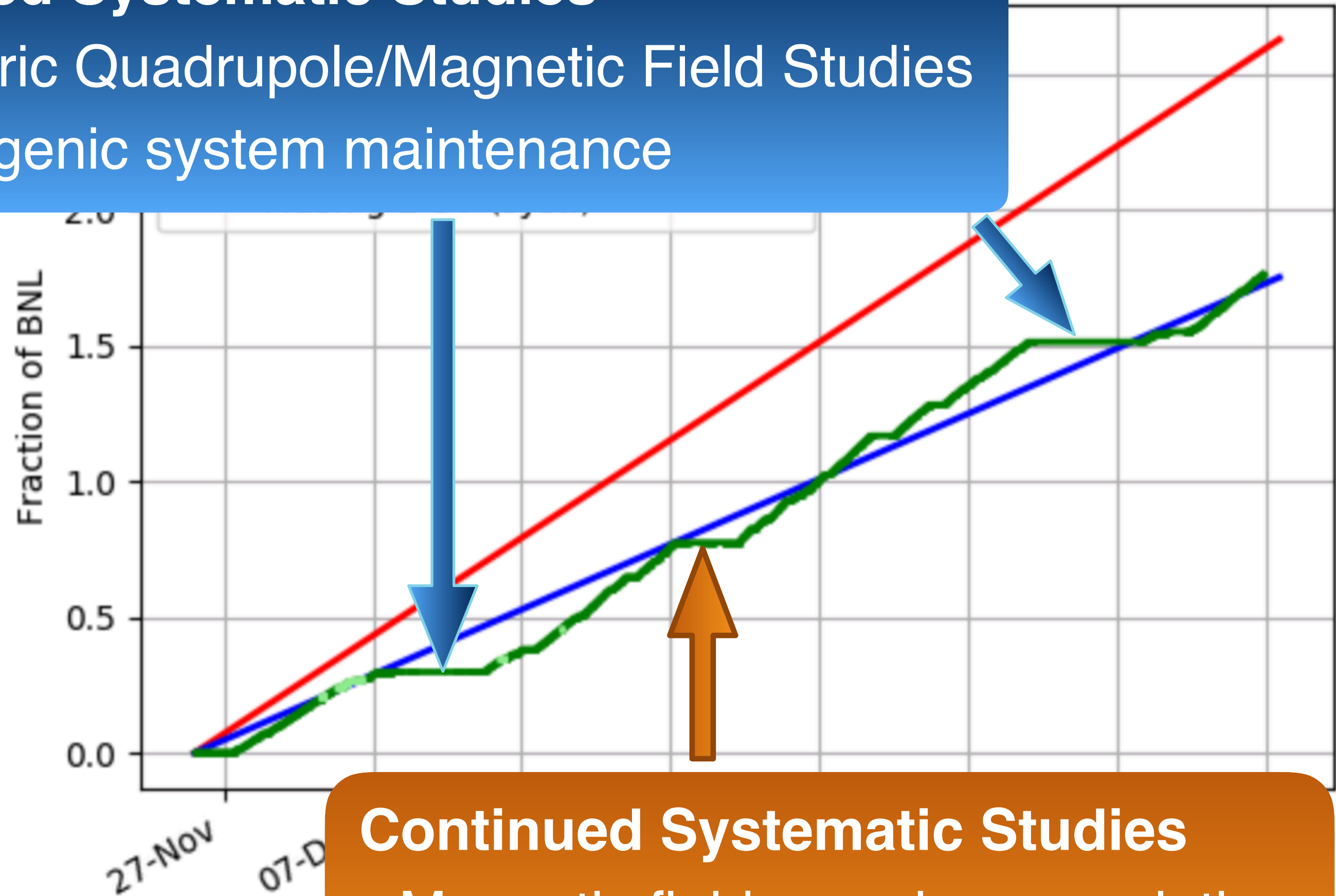
# Highlights Since December 2019



- **Production running** from Nov 22—Dec 7
  - 5.5% increase in integrated muons from AD
- **Systematic studies** for the
  - Week of Dec 7—13
  - Week of Jan 20—26
- Took advantage of **beam-off period from Dec 27—30** with systematic studies
- Presently at  $\sim 1.75x$  BNL in our 3<sup>rd</sup> physics run

## Planned Systematic Studies

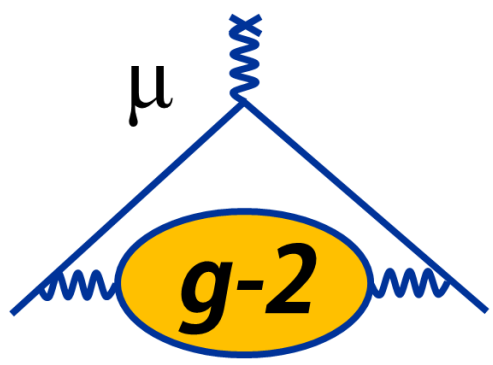
- Electric Quadrupole/Magnetic Field Studies
- Cryogenic system maintenance



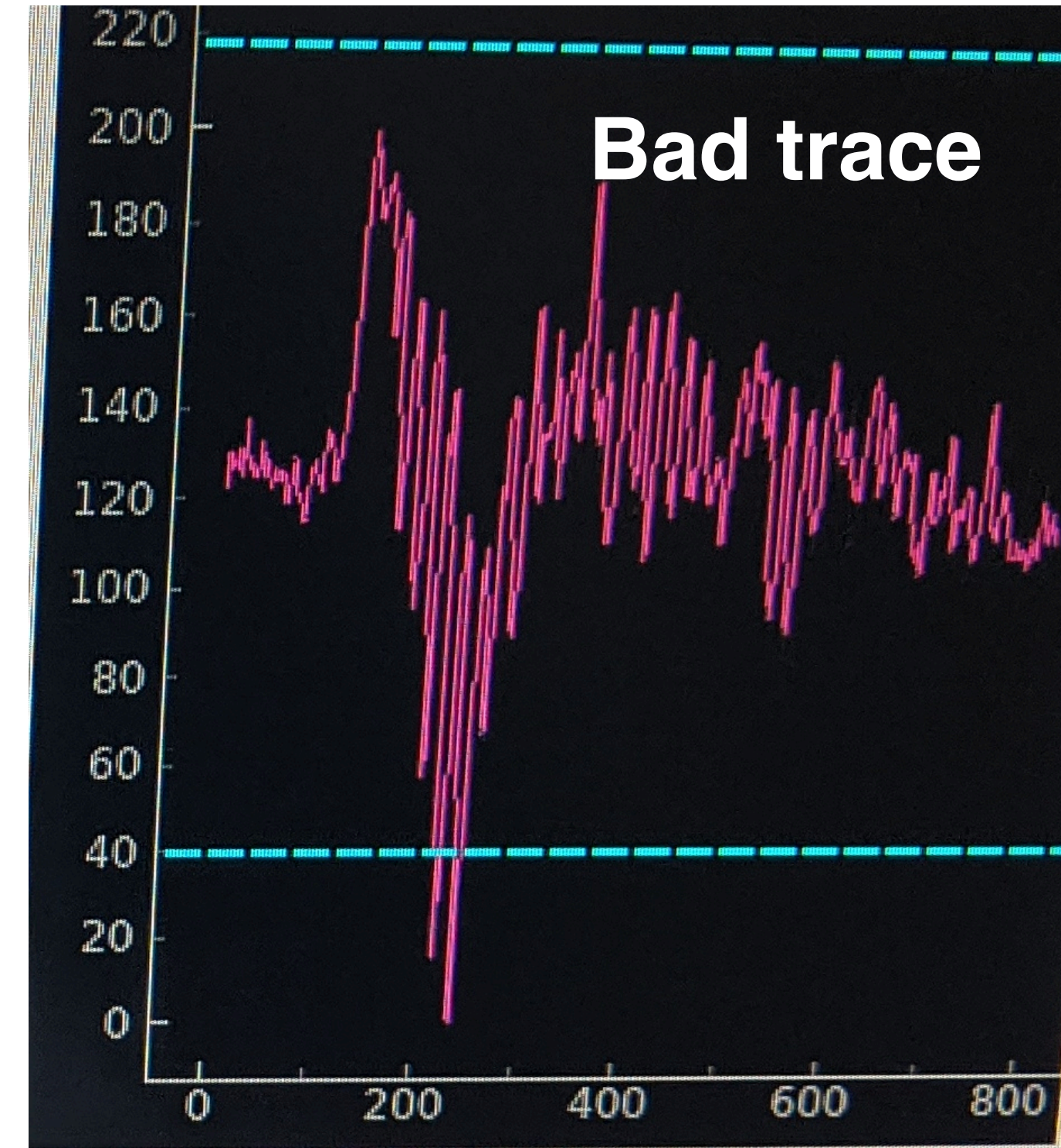
## Continued Systematic Studies

- Magnetic field mapping, correlation studies during MI fixes

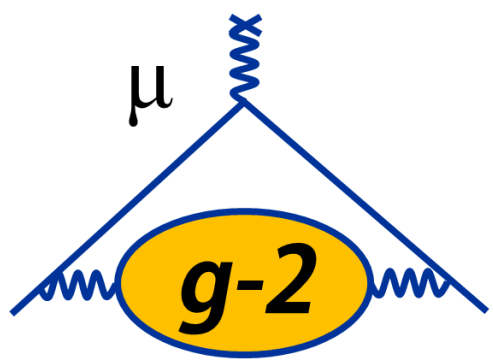
# Kicker Fixes 12/30—31/2019



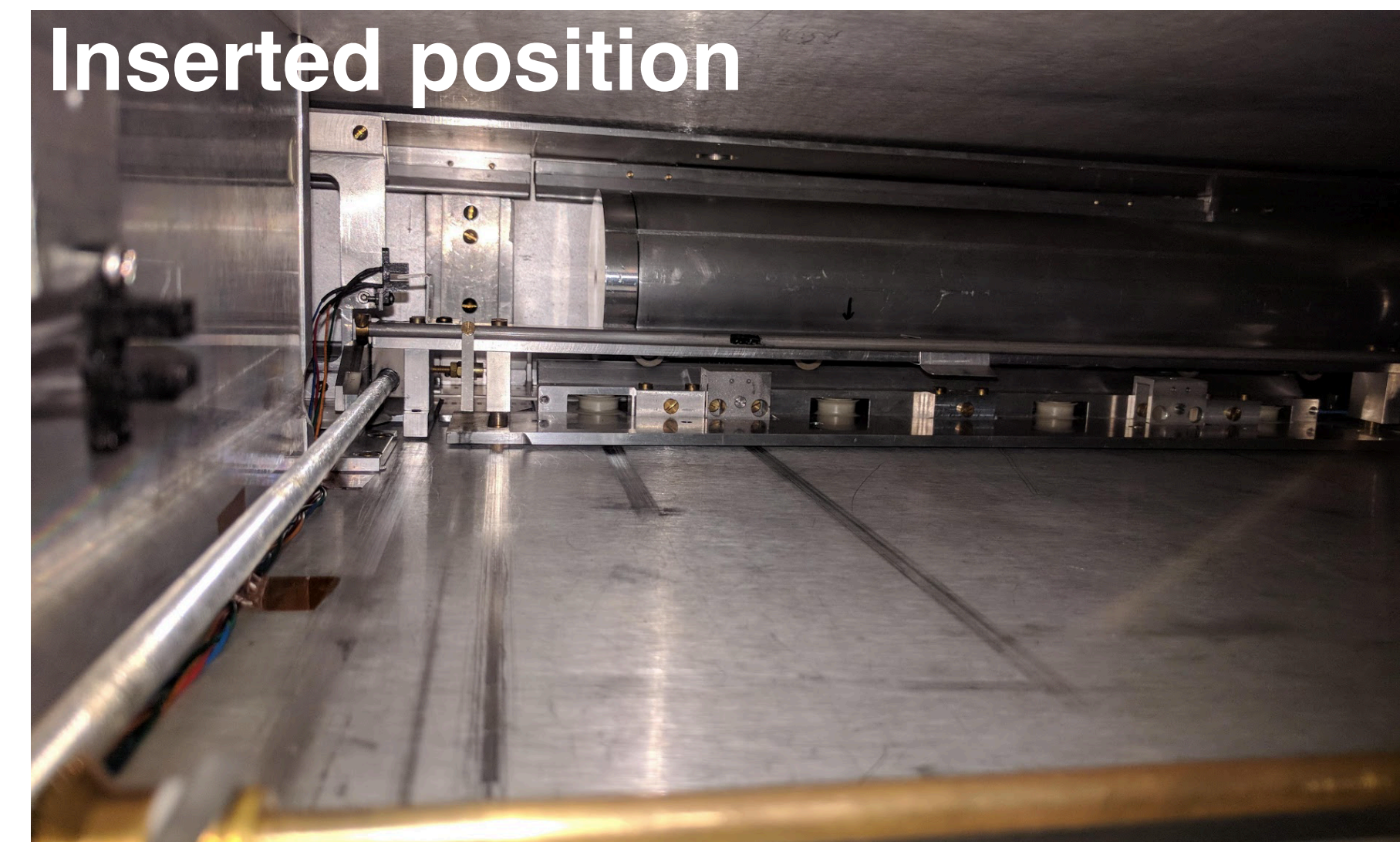
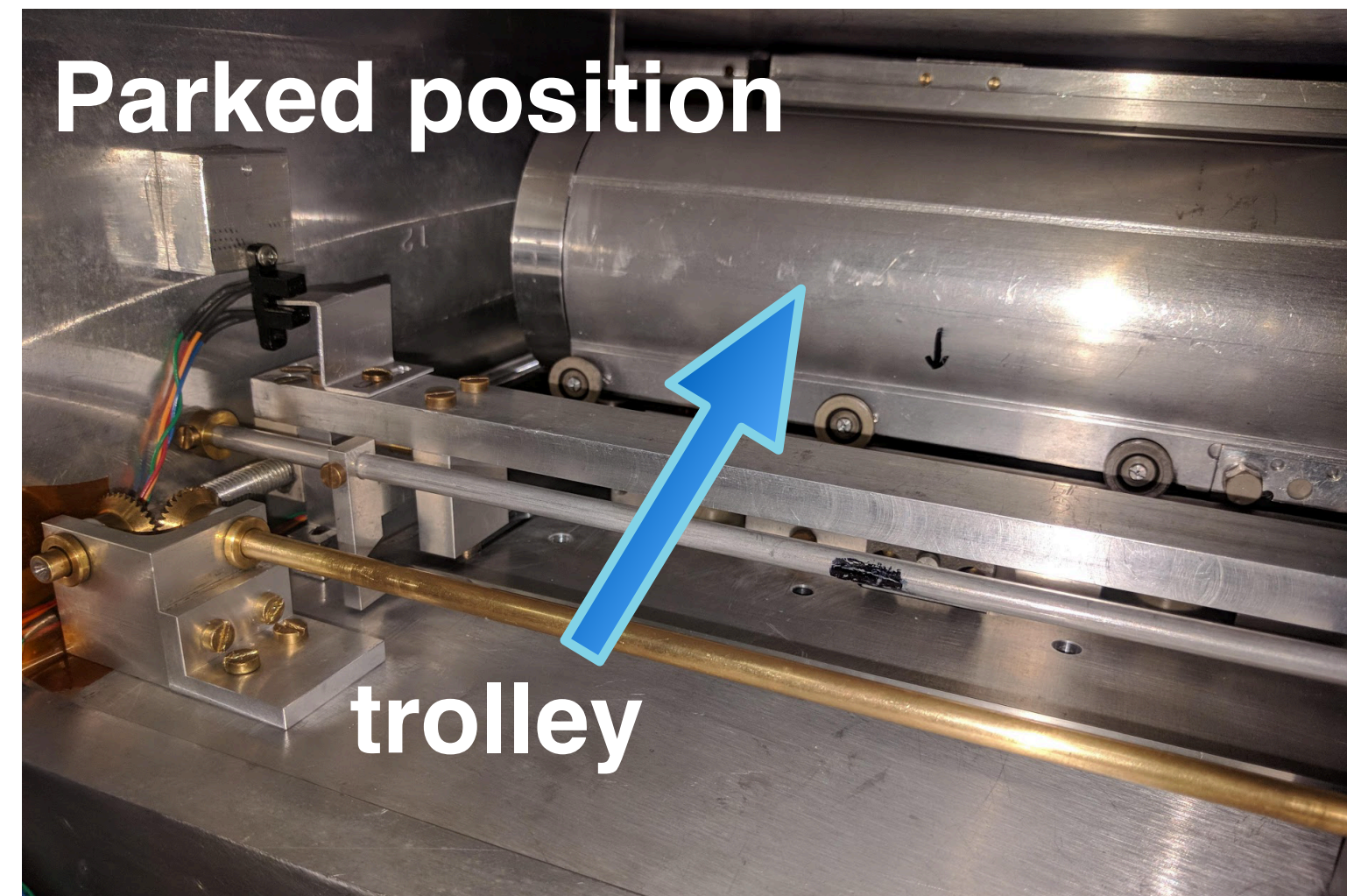
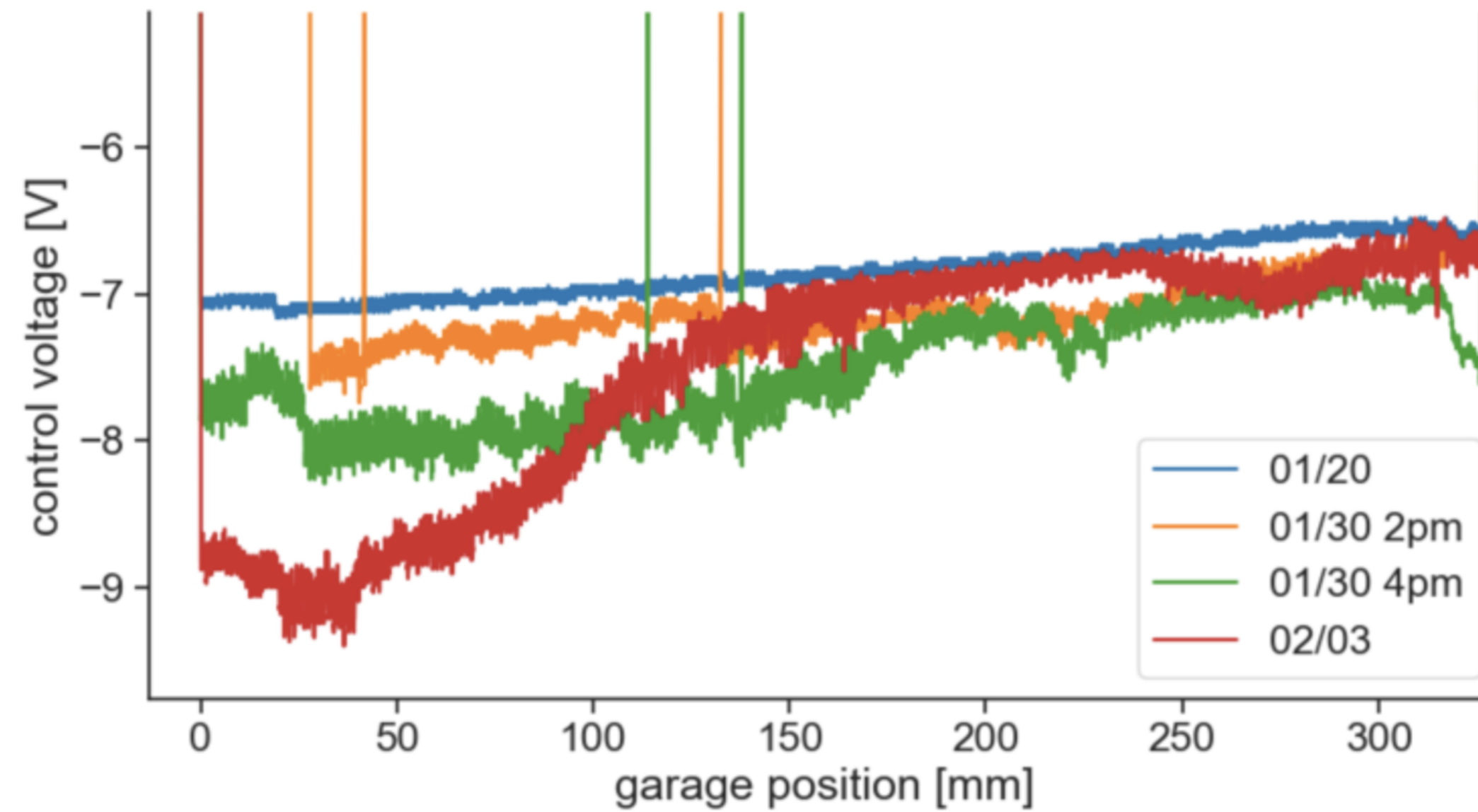
- As beam was coming back, one of our kicker magnets had problems
  - Experienced (audible) sparking
  - Showed a poor signal on our monitors
- Experts investigated late at night; identified the cable cluster that was the problem
  - Decided to power down overnight 12/30
  - Investigation on 12/31 with AD expert to identify and replace cable



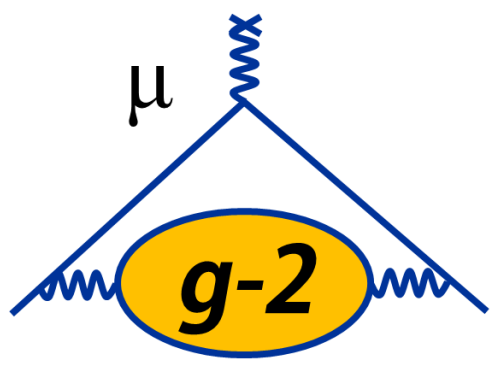
# Trolley Garage Maintenance 2/5/2020



- To map the magnetic field, we deploy a motorized cart outfitted with NMR magnetometers (**trolley**)
- **Late Jan/early Feb:** Control voltage on insertion mechanism was not normal
- **Yesterday:** Took advantage of beam downtime to perform maintenance, install spare motor



# Outlook: Muon POT, e<sup>+</sup> Statistics



- AD has delivered our base muon POT to date, despite our systematics studies
- g-2 is on pace with our baseline statistical goals
- No significant downtime planned for coming weeks; next downtime to coincide with March beam-down period (will perform cryo maintenance)

