Muon g-2 AEM Update

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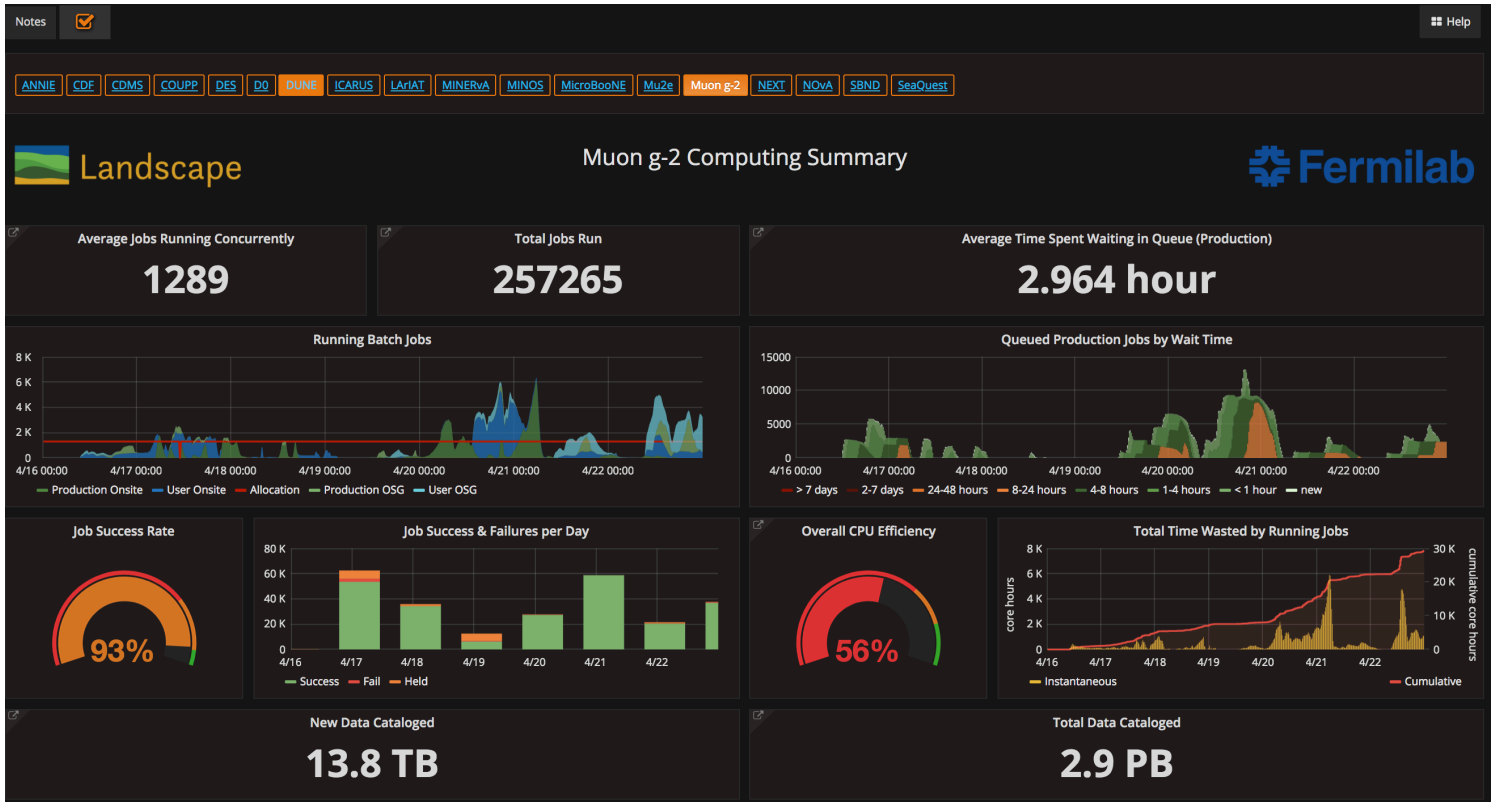
Computing



- New Release: 56% CPU efficiency is up from recent lows (9%)
- Plan to cut # of production jobs in half by combining unpacking and reconstruction → Expect to improve CPU eff
- Offline production still lags online data-taking by ~ 4 days
  - bottleneck with #dedicated CPU's to extract metadata was identified and solved last week.
  - 4 extra CPUs added
  - new bottleneck with writing files to tape. Trying to address this problem today.

Last Week

- Mon-Tue: Systematic Studies, holding for S:HP3DS repair
- Beam down Wed owl
  - Field Day
  - Trolley Run
- Thu-Fri: Analysis days to establish revised setpoints
- Fri-Mon: Production!
- e^+/fill peaked 550, steady ~530
- ~50% of TDR design

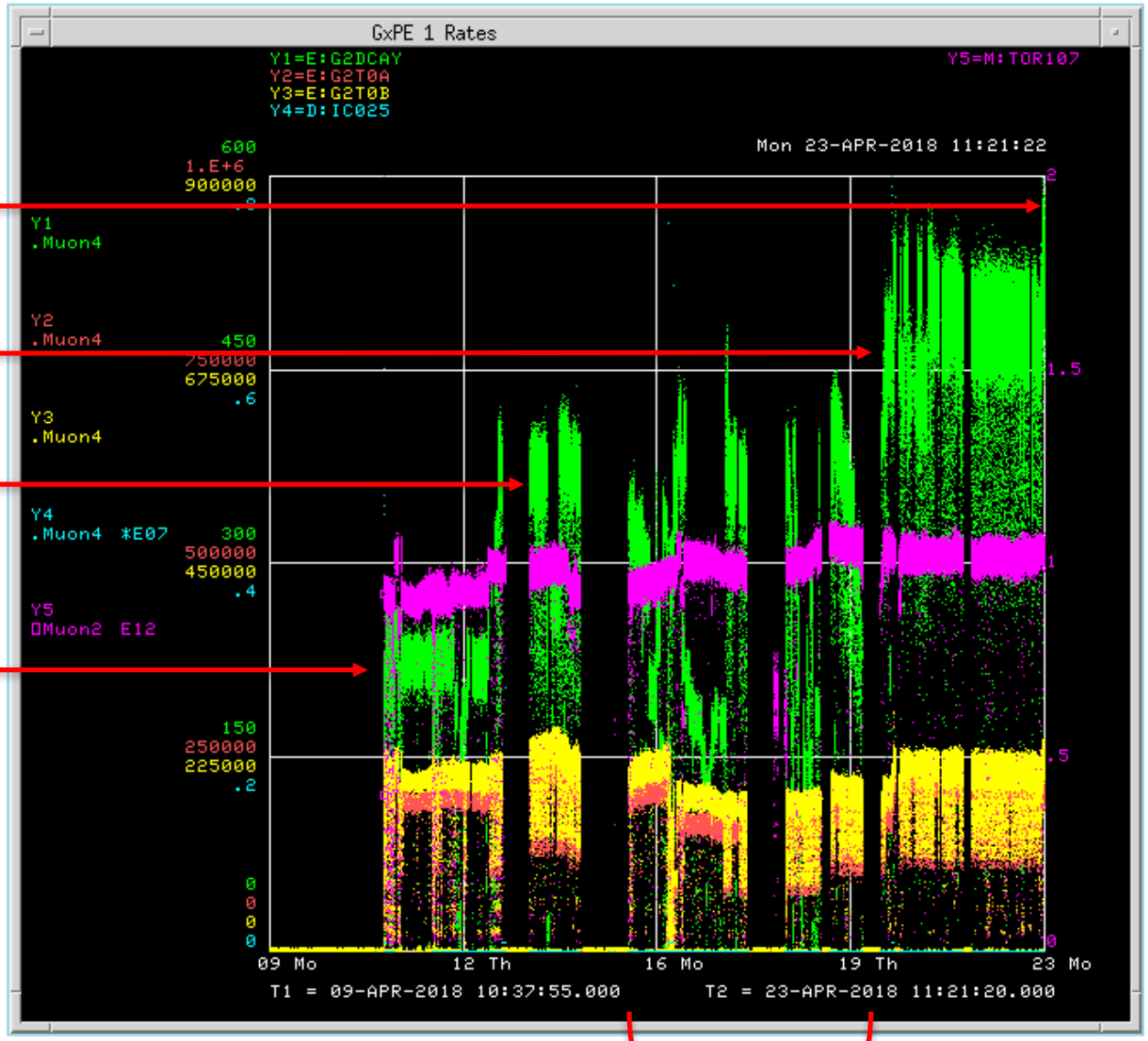
Improved Injection Parameters, Better Tuneup

Beam tuneup, ~530

Kick HV up, optimize injection, ~480

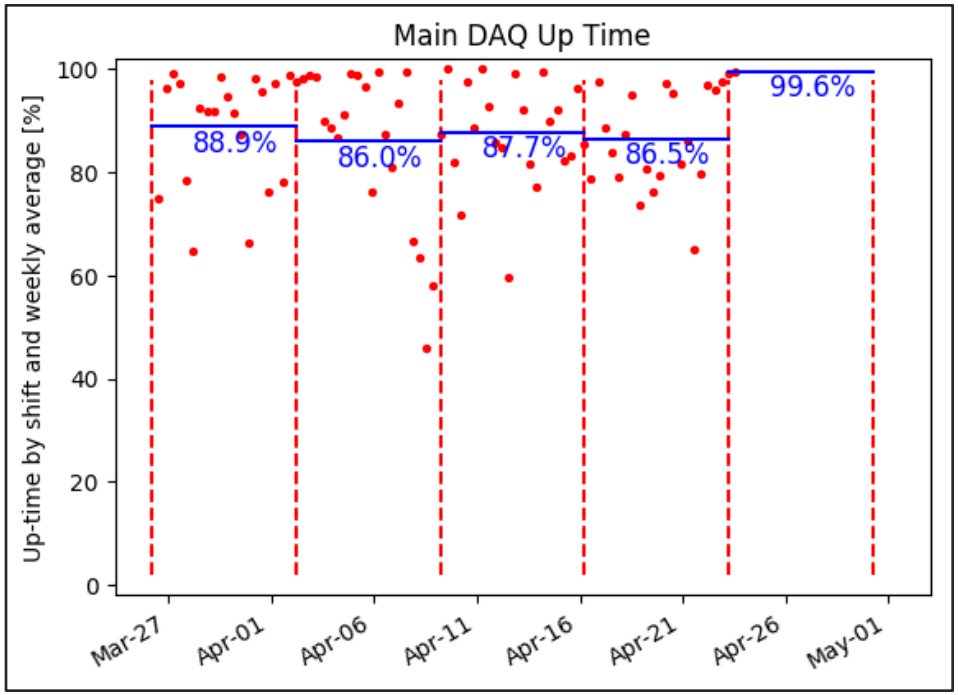
Increased kicker HV, ~390

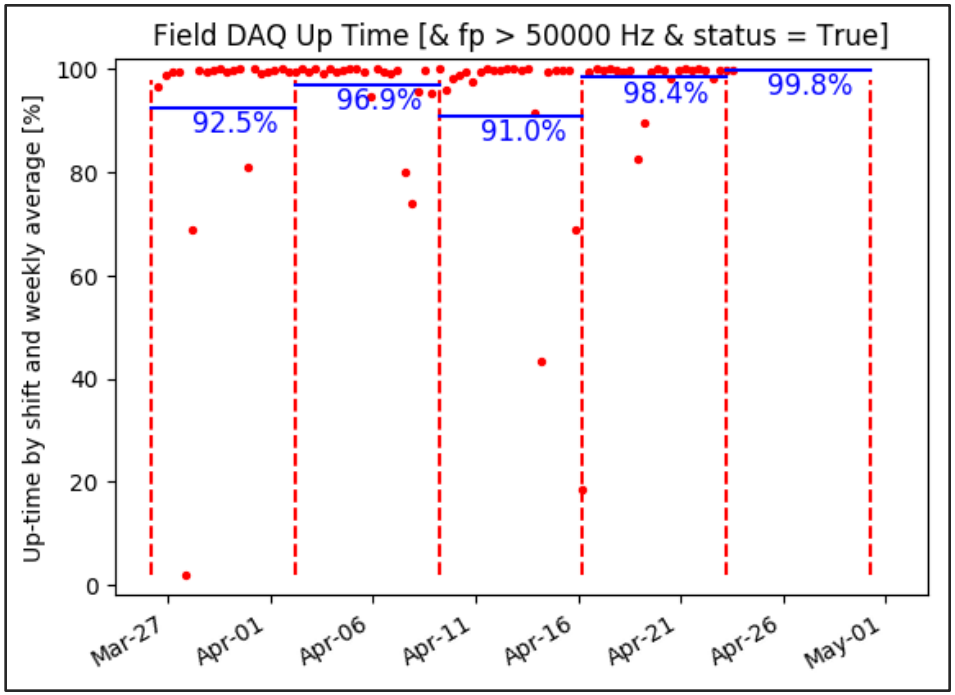
Default since Mar 17th, ~225



Injection Studies

DAQ Up Time Trend Plots



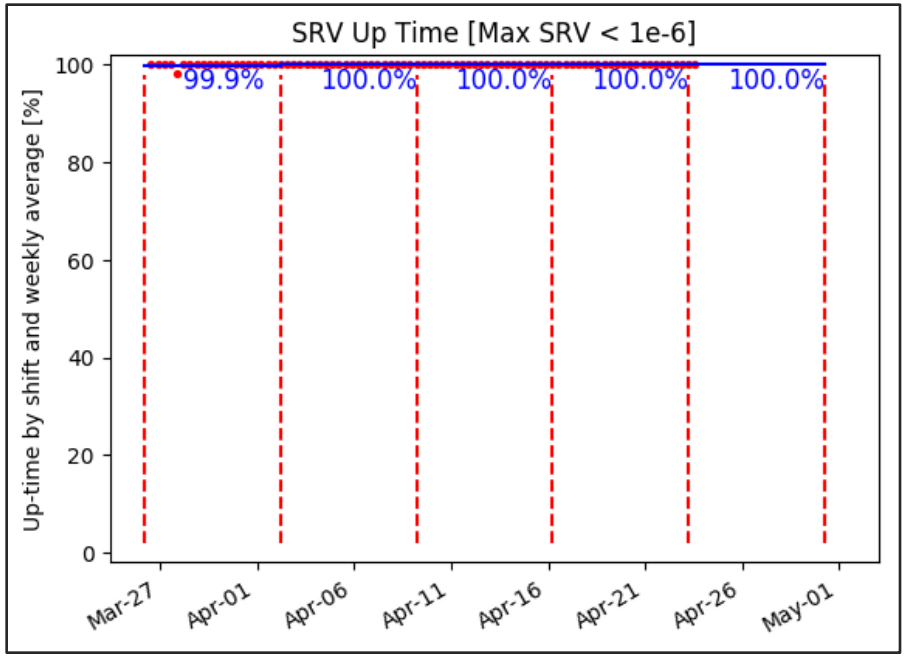


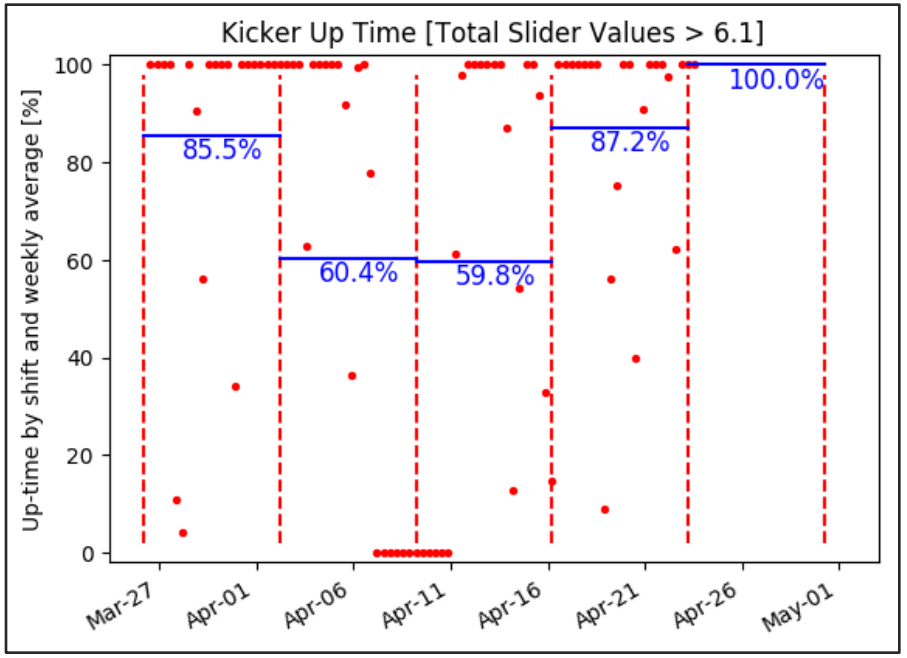
Some beam-off downtime last week

Sat: Changed file size (help with offline), restart frequency

High efficiency

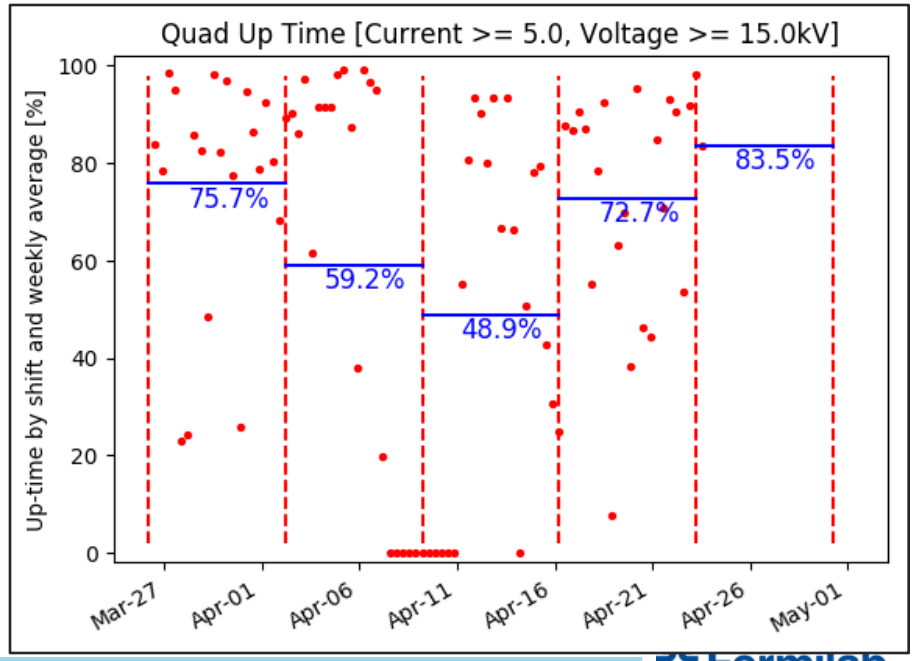
No performance issues

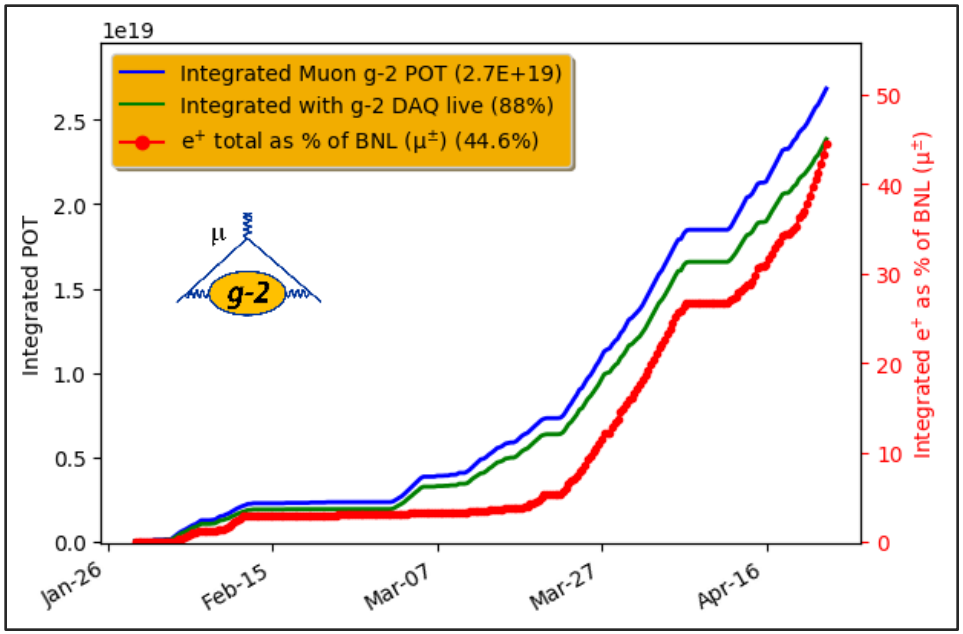


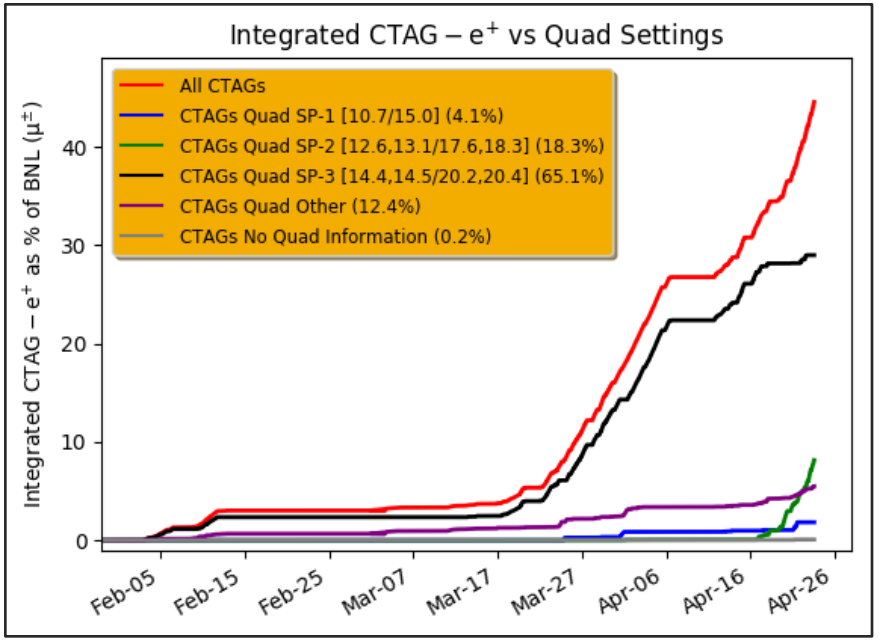


Trend Plots Ring

- SRV up for a while now
- Kickers only down for trolley runs, kickers happy at new set point
- Quad definition changed (up = any of the physics setpoints, not just the highest)







Performance

- All decay positrons
  - Quads at intermediate setpoint (green curve)
- ~0.45 x BNL since 3/21 (0.13x BNL since last AEM)
- 88% POT weighted livetime
- Our best shifts e+ continue to get better