

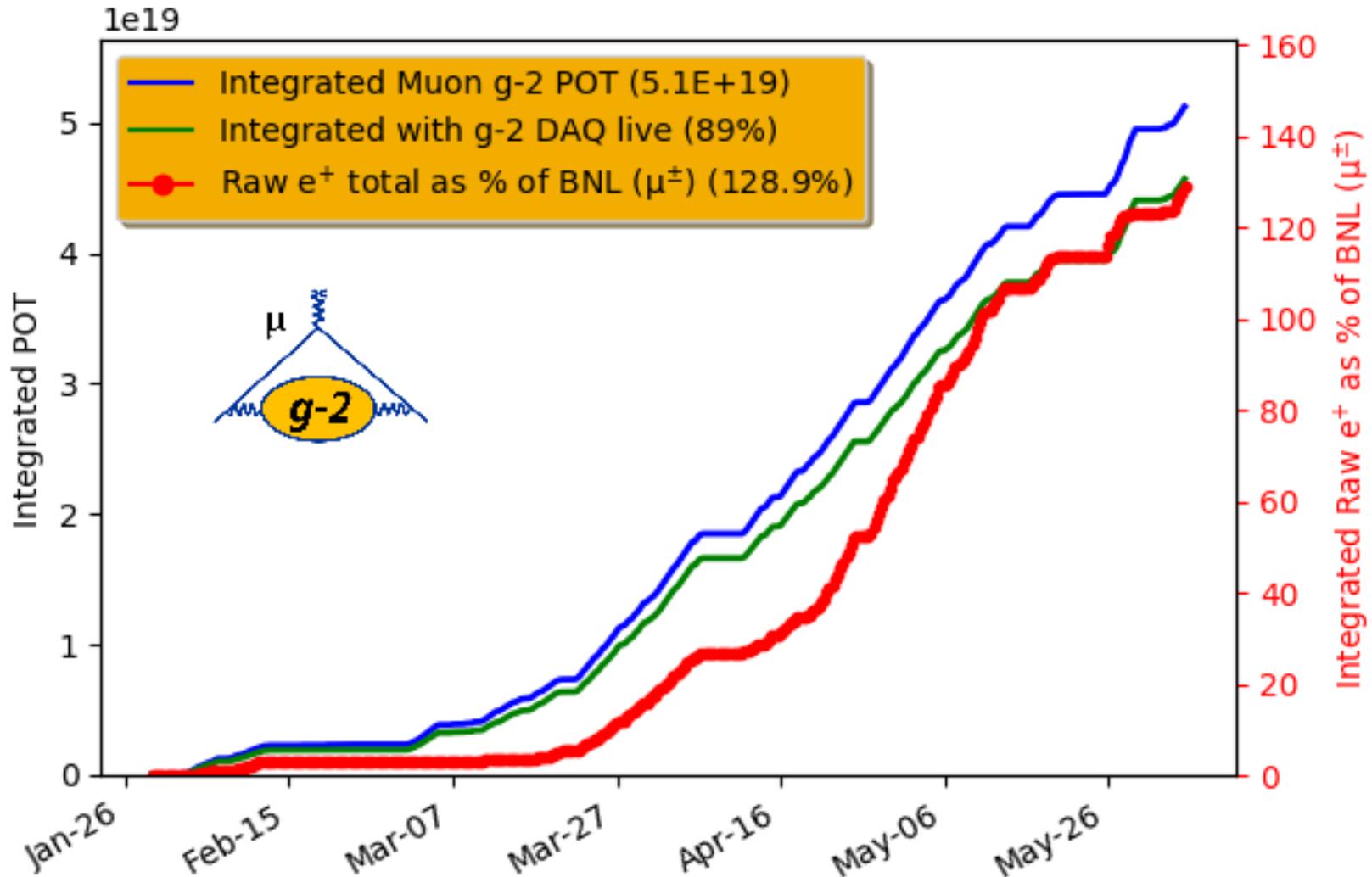
Muon $g-2$ AEM Update

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June 4, 2018

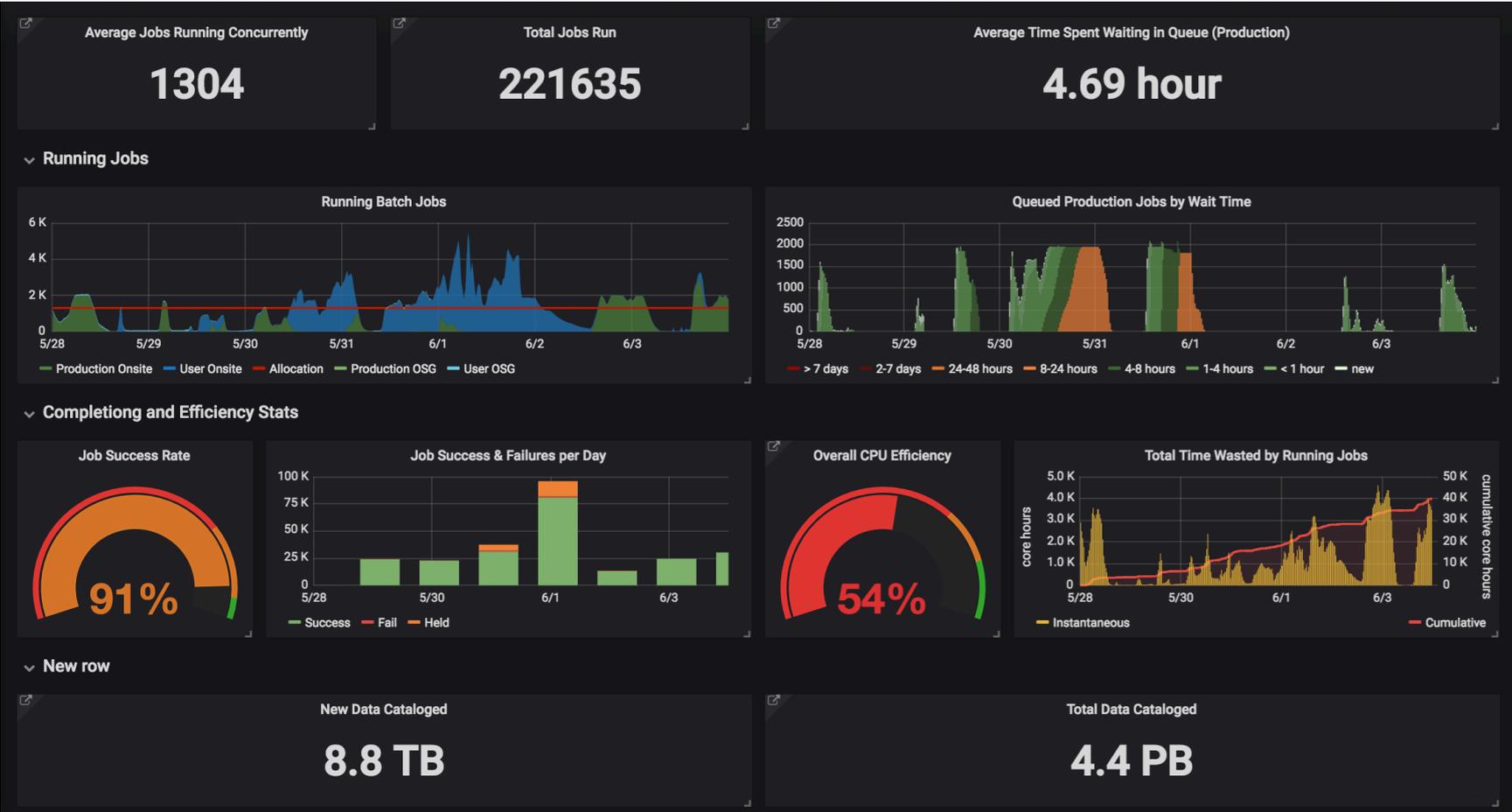
It were two rough weeks for Muon g-2

- Kicker 2 repaired for 3rd time
- Stable running for 2 days
- Kicker 2 repaired for 4th time
- Stable running for 2 days
- Kicker 1 thyratron power supply failed for 2nd time
- Stable running for 2 days

Added 12 % of BNL in last two weeks



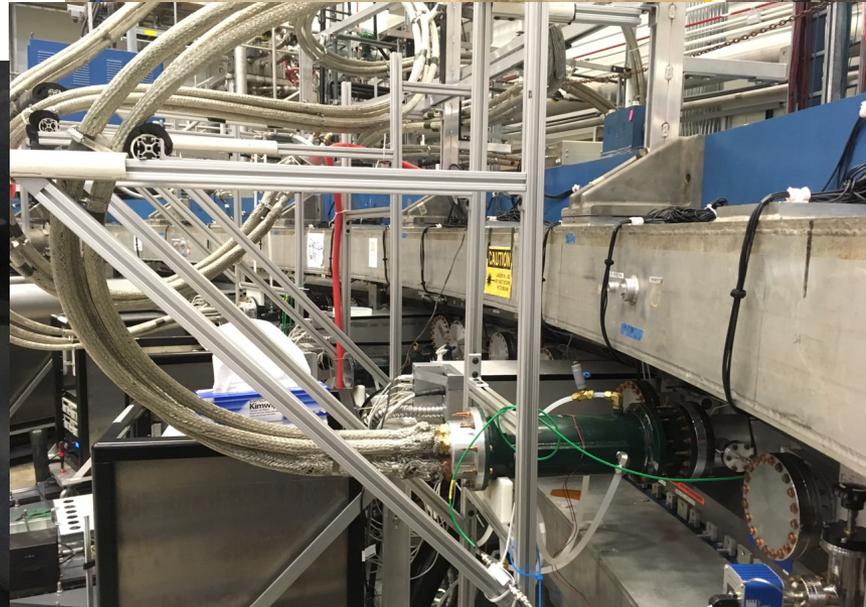
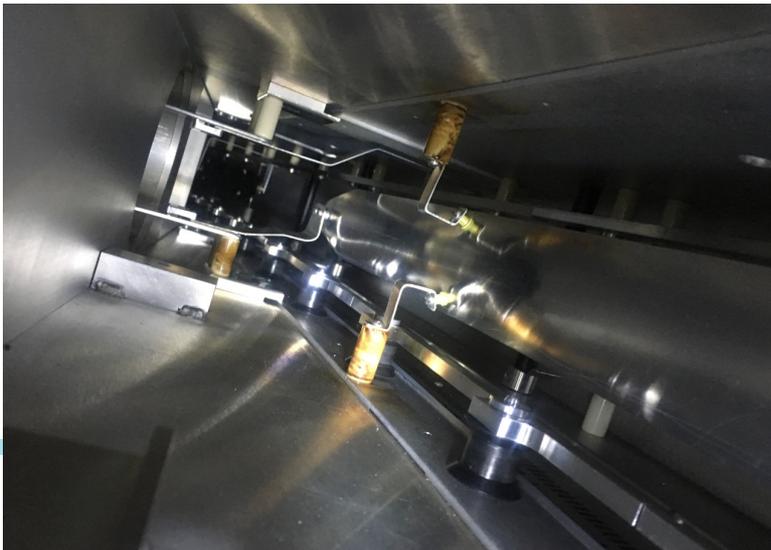
Computing



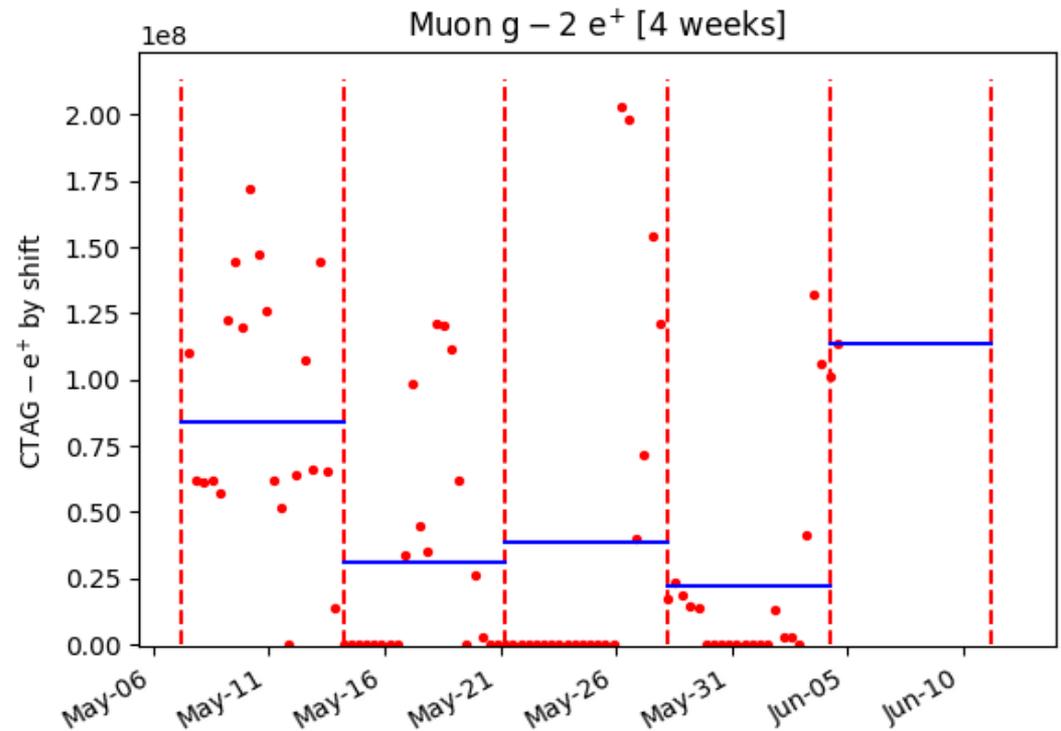
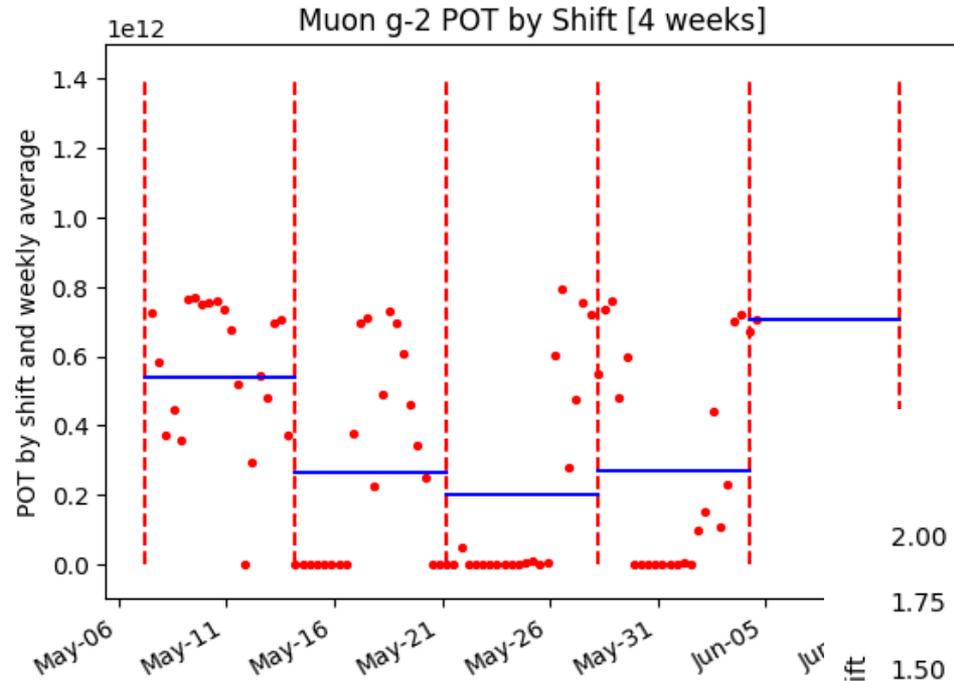
- Efficiency improved with a new software release
- Reconstruction catching up raw data rate

How a kick is made?

- a *charging power supply* charges up
- *capacitor bank* to low voltage (700 V) that is discharged
- through a *transformer* into
- a *Blumlein*, which is a HV capacitor (55 kV), that is discharged through
- four *50 Ohms resistors*, which convert high voltage into high current into
- in-vacuum *plates*, where the current generates magnetic field that rotates momentum vector of muons



Sustainable way to run stably



Muon g-2

June 4, 2018

Update for AEM

Summary

- More kicker problems:
 - Replaced everything, and redesigned the most problematic parts
 - Reduced kick strength by 10 % for 15 % less stored muons
- Running stably for a couple days, adding 4 % of BNL/day
- Plan is to keep running stably