

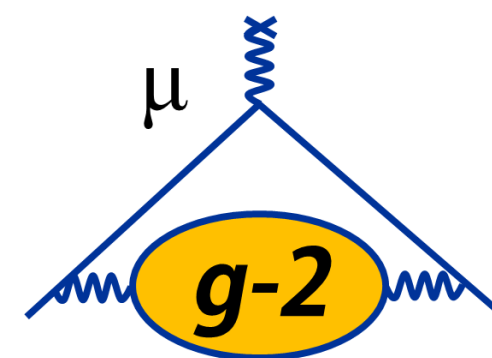


# Muon g-2 Update

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Proton PMG

7 November 2019





# Highlights in Last Month

## Magnets

- CTCR testing completed
- Performed a 60-K warmup to improve cryogenic vacuum — successful, and cooled back down
- Main ring + inflector powered to full current

## Kicker

- Upgraded connectors on all three Blumlein systems
- 10-hr tests performed to verify operation (Run 2 settings)
- Magnetometer upgrades (to measure kick strength); measurements in progress

## Electrostatic Quads

- Installed additional transformers for increased RF power (CBO reduction)
- Verified operations at Run 2 settings

## Field

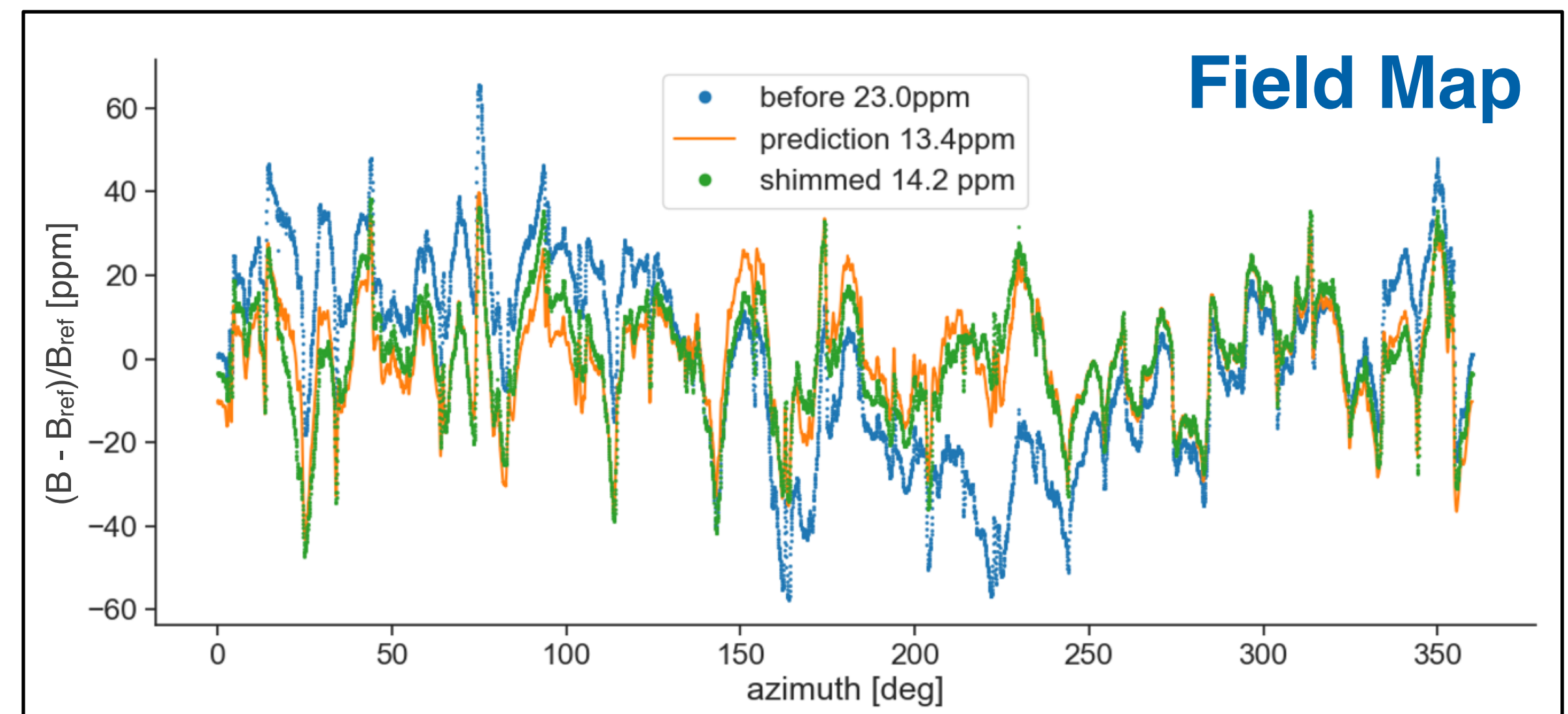
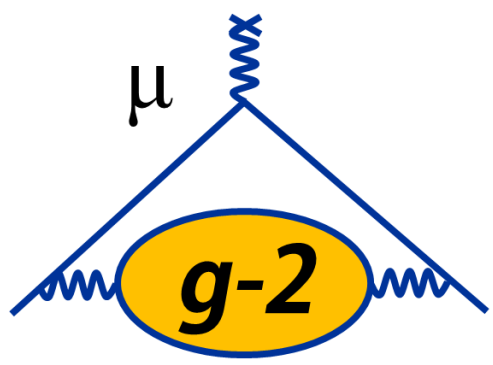
- Mechanical (wedge) shimming to improve field uniformity
- Systematic studies with quads pulsing ongoing



**All systems ready for Run 3**



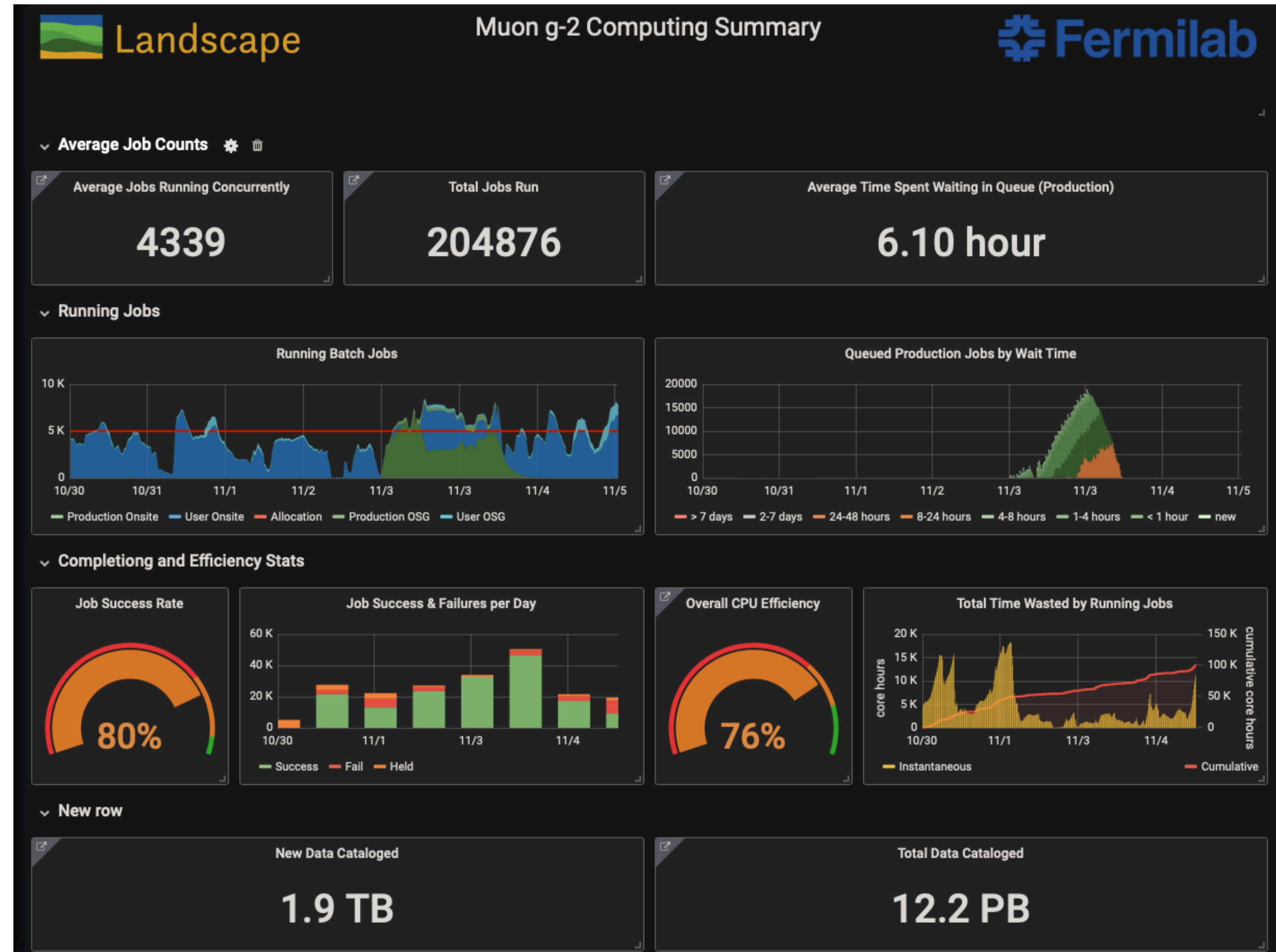
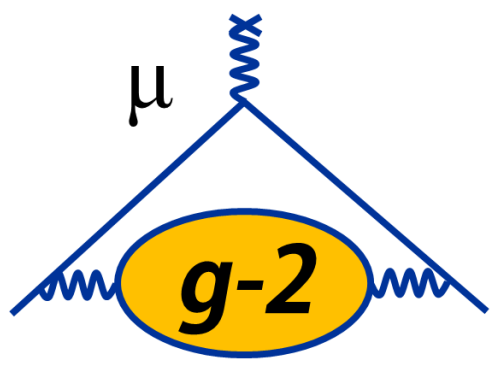
**Upgraded  
Kicker  
Blumlein  
connections**



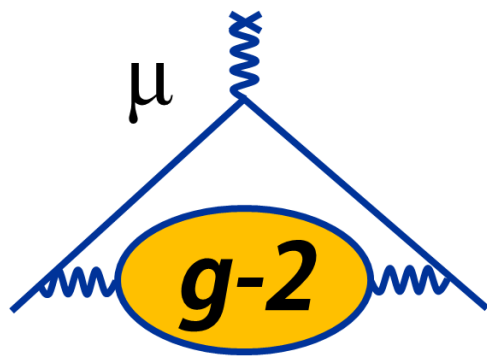


# Computing Status

- Job success rate is ~80%
- Using ~5000 slots on FermiGrid
- Now using grid resources at Liverpool; adding Manchester and Lancaster next month



# Run 3 Commissioning Schedule



| System    | 10/7–10/13                                  | 10/14–10/21  | 10/22–10/27                     | 10/28–11/3                                    | 11/4–11/10                       | 11/11–11/17 | 11/18–12/1 |
|-----------|---|--|---------------------------------|---|----------------------------------|-------------|------------|
| Magnet    | <div>magnet to full power</div>             |  |                                 |   | today                            |             |            |
| Inflector | <div>Quench protection test</div>           |  |                                 |   |                                  |             |            |
| Kicker    | <div>Quad/Kicker interference studies</div> | <div>Magnetometer support construction</div> <div>K1, K2, K3 Blumlein connectorization</div> |                                 |   | <div>Magnetometer studies</div>  |             |            |
| Quads     |   |  |                                 |   |                                  |             |            |
| Field     | <div>Field studies w/Quads</div>            |  | <div>Shimming (wedges)</div>    | <div>Field maps (shimming confirmation)</div> | <div>Field studies w/Quads</div> |             |            |
| Laser     |   |  | <div>Cooling installation</div> |   | <div>Double-pulse studies</div>  |             |            |

System tuning on beam