

The MINERvA Operations Report

Nuruzzaman

(home.fnal.gov/~nur/)

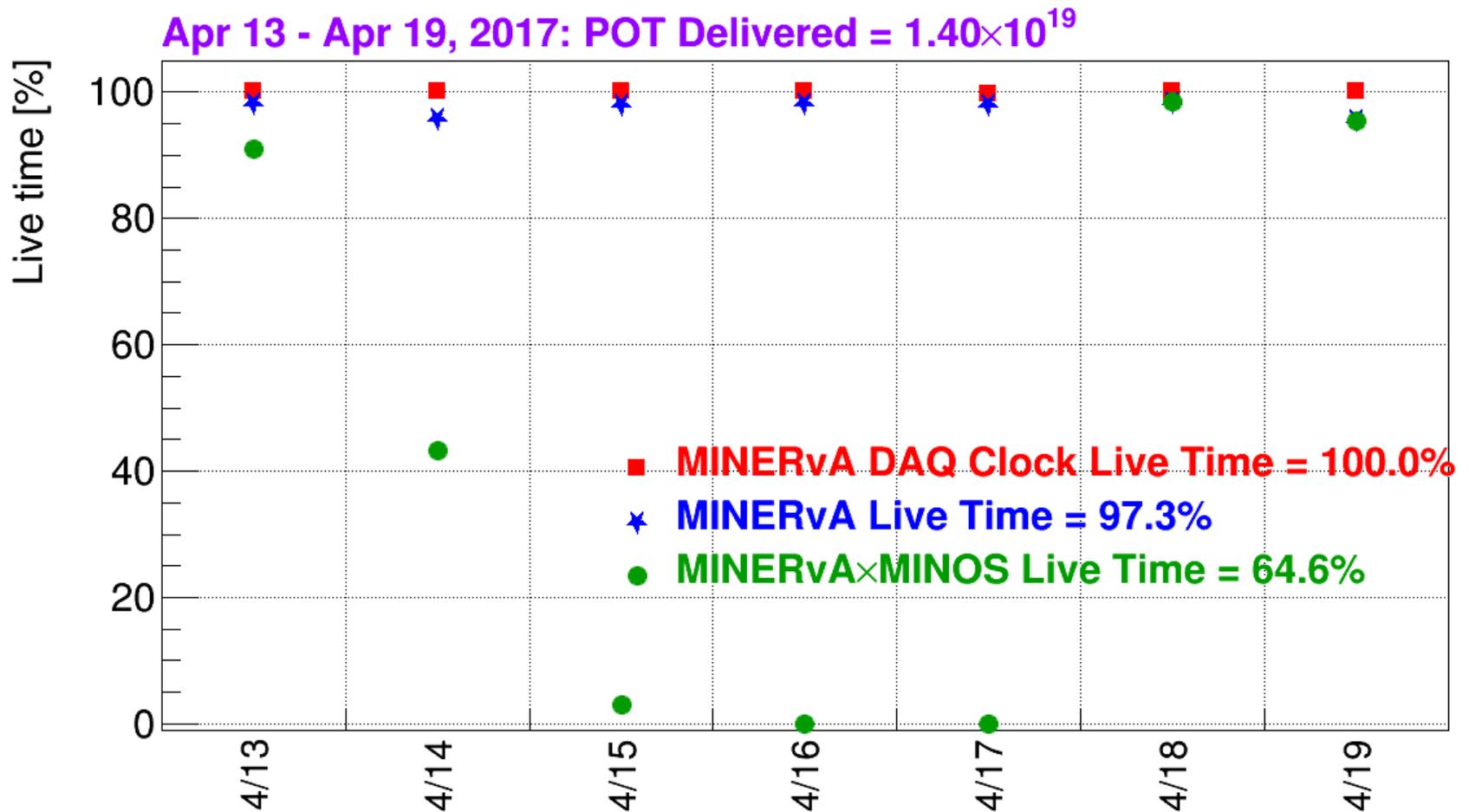
for the MINERvA Collaboration

All Experimenters Meeting

24 April 2017



Live Time and Data



- 4/13-14 – MINOS magnet tripped few times
- 4/15-17 – Struggle with MINOS magnet
- 4/17 & 4/19 – One file failed to process with MINERvA hardware error, investigating

MINOS Magnet Issues



- ❑ 4/13 Thu – MINOS magnet tripped around midnight

- ❑ 4/14 Fri – Expert access
 - The magnet AC breaker in the main distribution panel upstairs tripped.
 - The magnet power supply current regulation system was broken - this is the feedback loop which allows the magnet to run in a constant current state.
 - The current transducer electronics chassis was replaced and the current transducer sensing head was checked.
 - The polarity switch remote control is forcing the switch in forward polarity hence it has to be left on local mode after switching it to reverse polarity. This will be investigated during the shutdown.

- ❑ 4/15 Sat – The magnet tripped again. Decided to work on Monday.

- ❑ 4/16 Sun – More discussion. Magnet was off.

MINOS Magnet Issues



- ❑ 4/17 Mon – The magnet breaker tripped few times. Expert thought that something upstream from the power supply might cause the breaker to trip.
 - Tested the feed wires going to the power supply shut-off switch.
 - The next step was to pull and test the breaker in the big panel. Either steps required shutting down that big panel. Beam was off. One pair of the feeder cables was disconnected and isolated (at the magnet level). Only one one pair is now feeding the magnet.

- ❑ 4/18 Tue – If this second set of feeder cables fails, and assuming a spare breaker can be found, experts recommended to replace the circuit breaker.
 - This requires turning off the main power distribution panel, which will affect everything Underground (elevators, pumps, NOvA, and MINERvA/MINOS).
 - It's been running on half a load since about 1 pm. Thermal imaging camera showed a slight temperature increase after several hours which is expected given it's current configuration.

MINOS Magnet Issues



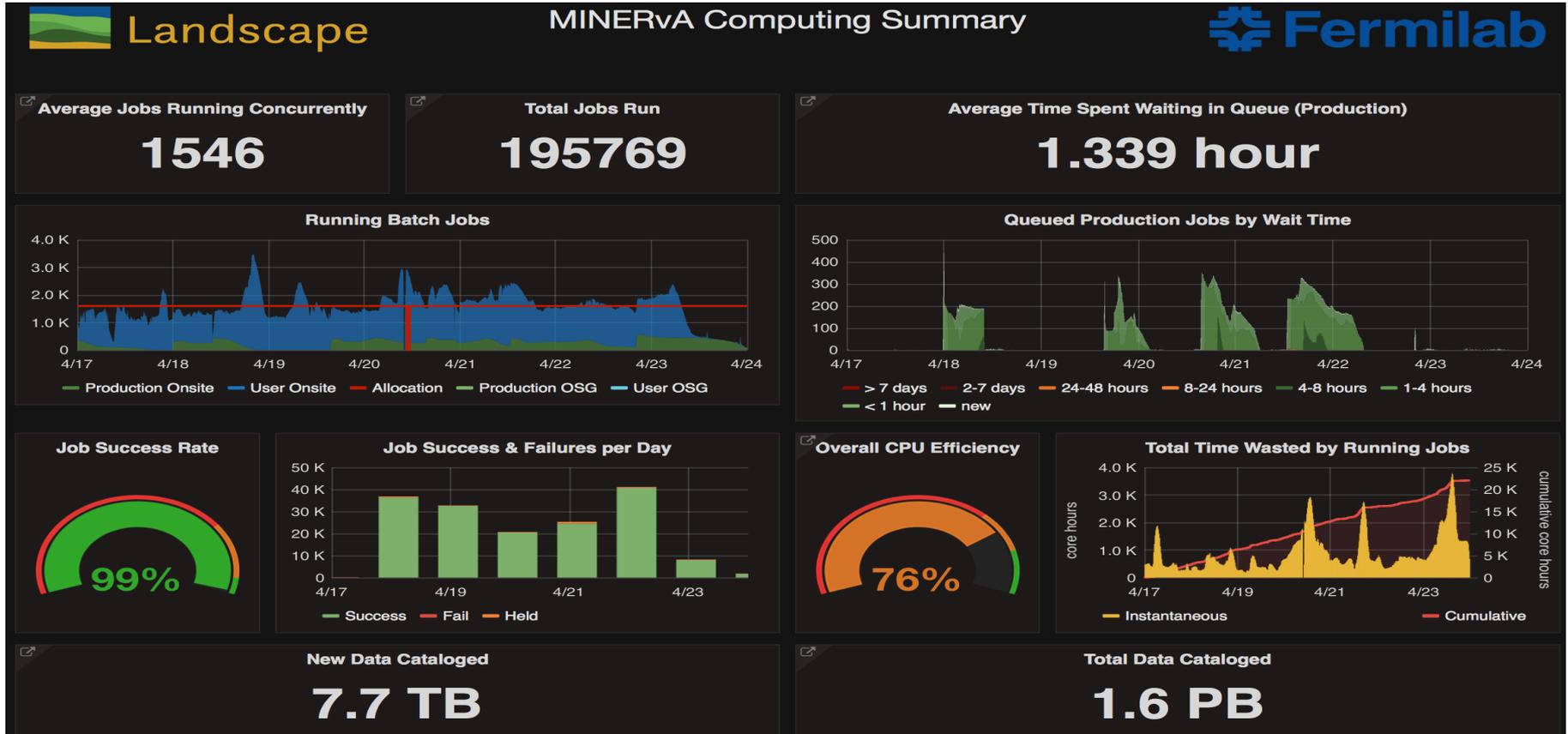
□ 4/19 Wed – No trips.

- The magnet has NOT tripped since April 19.
- The plan moving forward with the circuit breaker: Stay in this configuration until the Summer Shutdown, assuming the breaker does NOT trip.

Thanks a lot to all the experts from PPD, Accelerator Division and of course Neutrino Division to bring back the MINOS to operations again

- Donatella Torretta
- Walt Jaskierny
- Steve Chappa
- Martin Murphy
- Terry Johnson
- Steve Hahn (from a distance while he was on vacation...)
- Bryan Falconer
- Carrie McGivern
- Cindy Joe
- Lonnie Huitt
- Arnab Ghosh

Computing



- Average concurrent jobs are lower than quota
- Job Success rate is very good
- Overall CPU Efficiency is low due to the production jobs (MINOS stage with DB issue). Expect to resolve the issue with MINOS DB migration from MySQL to MariaDB soon.

Period 04/17 - 04/23, 2017



Thank You