



MicroBooNE Status
Bruce Baller - Fermilab

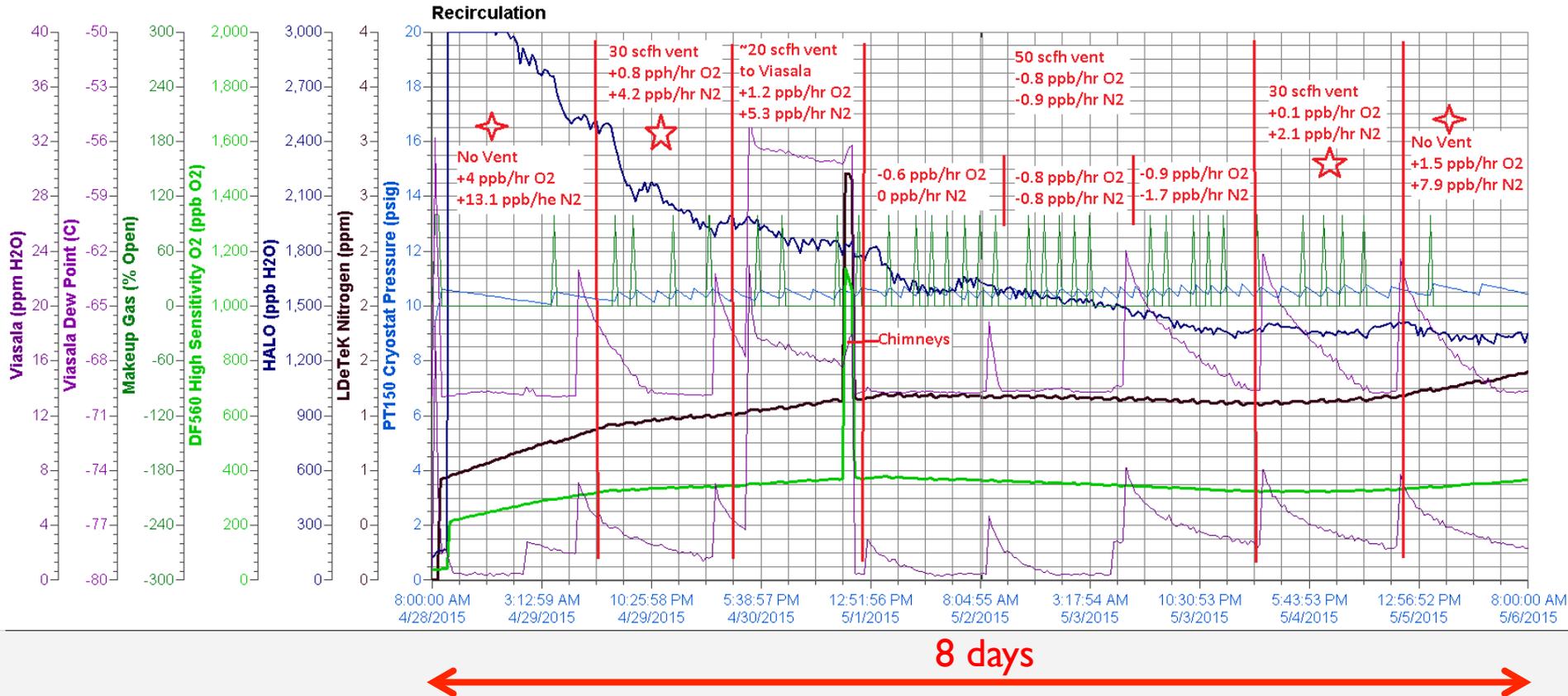
May 11, 2015

Cryogenics Commissioning

- ▶ **Liquid Nitrogen Dewar Filled**
 - ▶ Drained last Friday due to leak in a coupling
 - ▶ Fixed today
- ▶ **Compressor startup and repairs completed**
- ▶ **Gas recirculation using compressor in progress**
 - ▶ Removal of water looks to be nearly complete
 - ▶ Need to make sure all sources of contamination are well understood and/or tolerable to the experiment purity requirements **Done!**



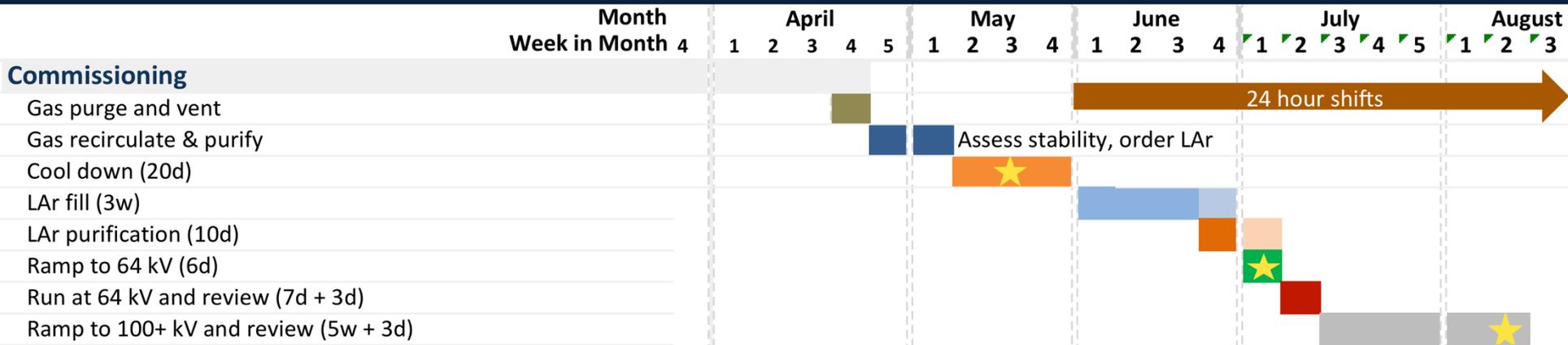
Argon Gas Recirculation & Purification



Studies show that contamination (H₂O, O₂, N₂) is due to outgassing from warm cables - not leaks

Top-down Schedule

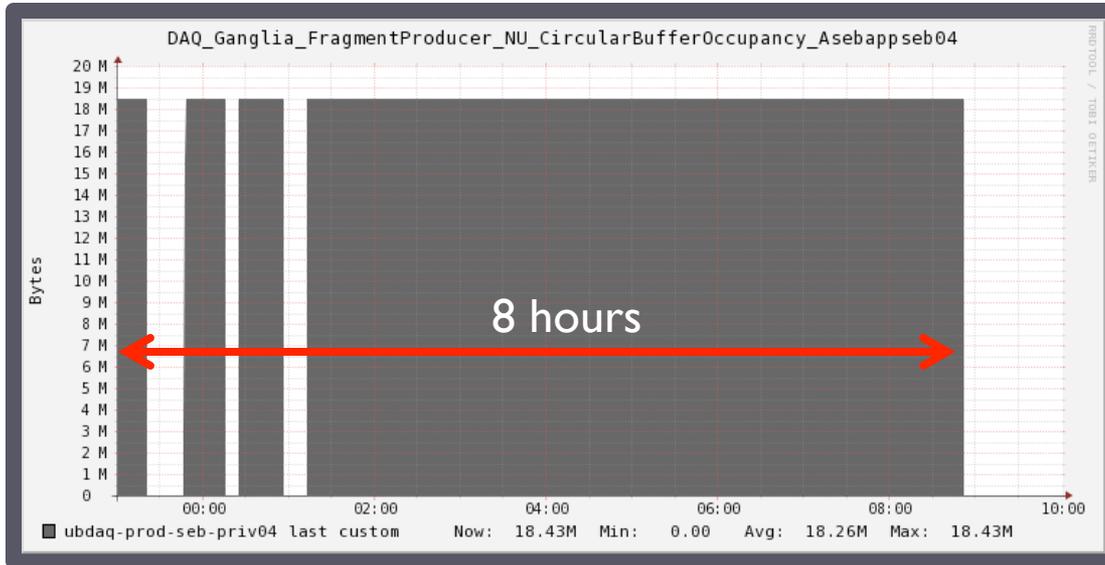
MicroBooNE Commissioning



Readout & DAQ

- ▶ Fixing a few remaining issues with the readout firmware
 - ▶ Huffman encoding intended to provide 10x lossless data compression
 - ▶ Now ~3X
- ▶ Over 20 TB of data taken in past month
 - ▶ Ran stably* and uncompressed at trigger rates of ~ Hz using an external trigger
 - ▶ *static discharges on crate or a laptop plugged into a readout crate causes problems
 - ▶ Exercised rates >300 MB/s (~3x higher than requirement)
- ▶ Daily noise runs
 - ▶ The set of noisy channels (~30 / 8250) is ~stable (± 2)
- ▶ Can use run control for taking data but it needs work to make it more shifter-friendly

Metrics to Monitor DAQ Health



Circular memory buffer occupancy on a sub-event builder machine

Event Builder disk-writing rate

