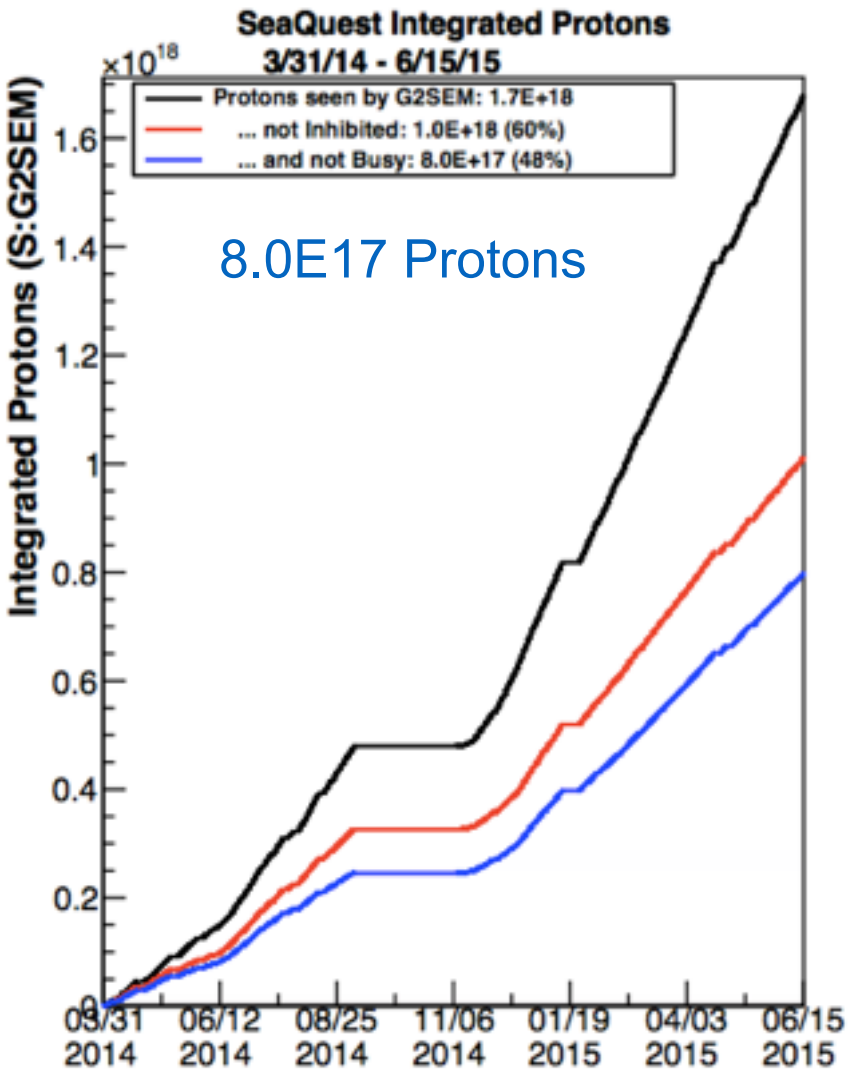
SeaQuest Status
June 8-14, 2015

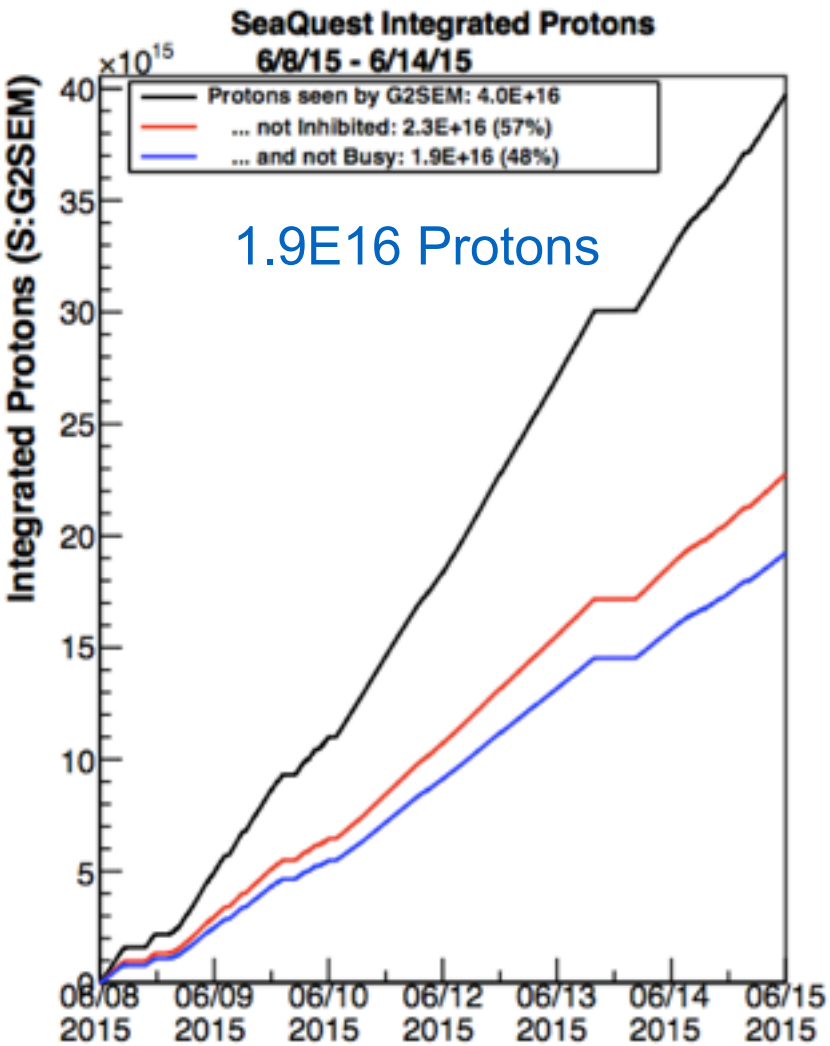
Brian Tice

June 15, 2015

Full Production Runs II+III



Previous Week

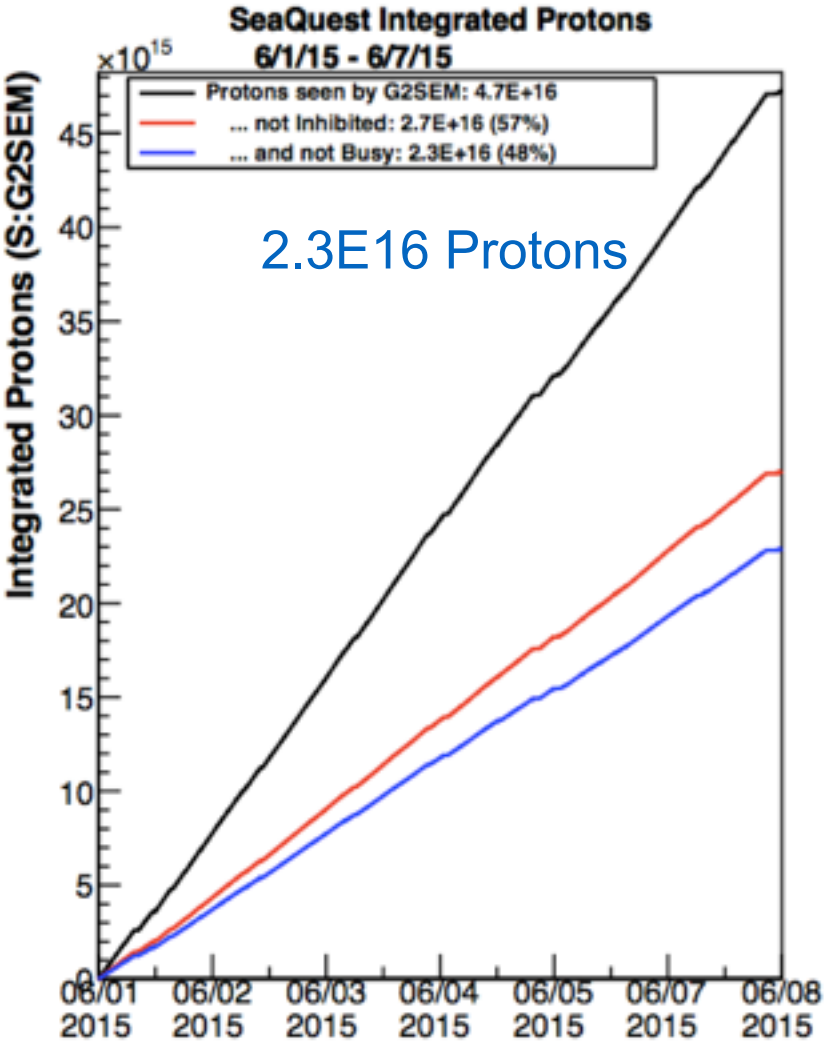


2 weeks ago

Why this wasn't shown last week

- Scaler DAQ should start a new run each hour
  - Requirement due to file size limit of decoder
- Script that starts a new run failed
- Files got too big too decode

- Recompiling decoder with appropriate flag fixed the problem
- New run script made more robust and integrated into alarm system



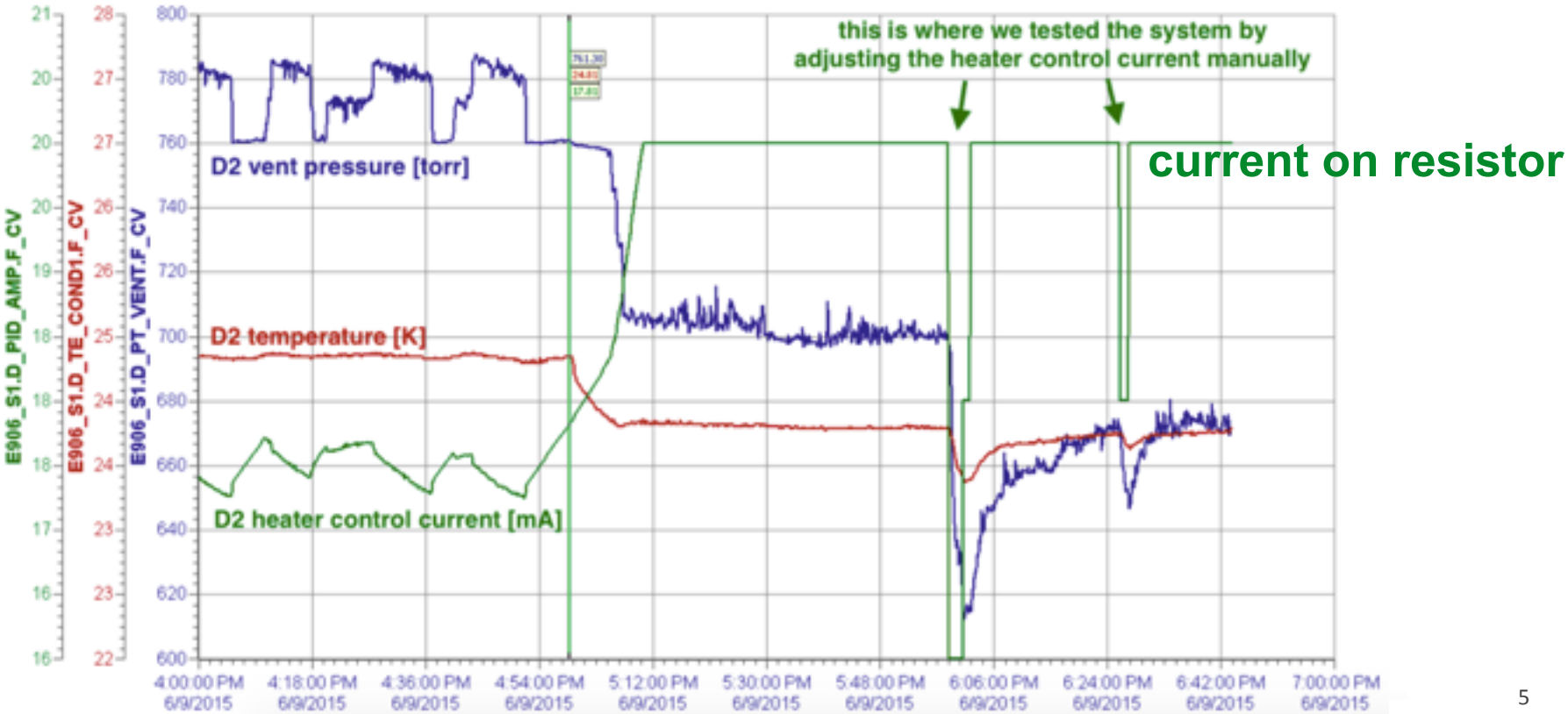
Summary

- Beam, targets, magnets, spectrometer, DAQ performed well last week
- Data collection went smoothly

Except…

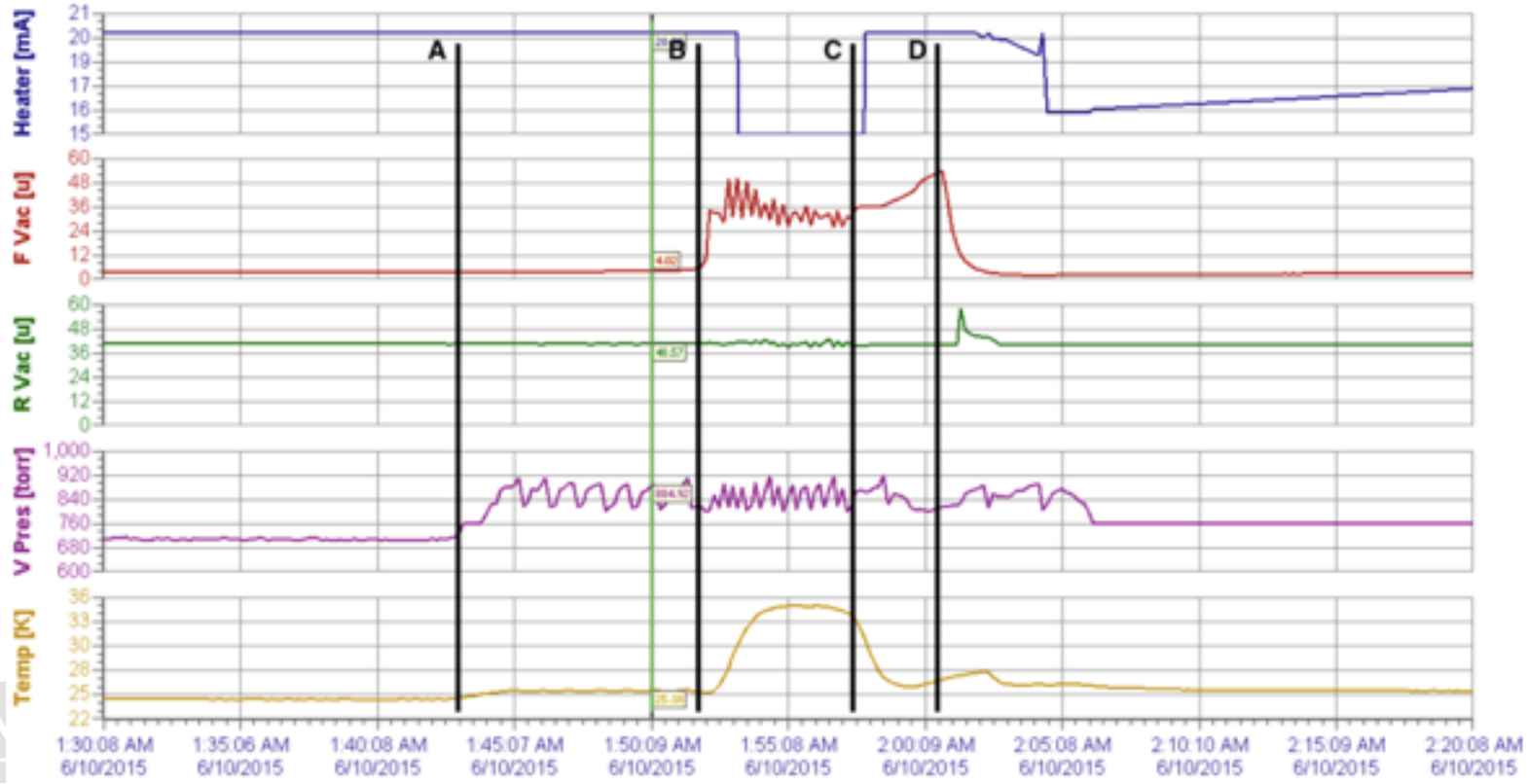
D2 Cryocooler Scare - Tuesday

- 1 of the 3 heating resistors in D2 cryocooler burned out
- This led to large current through remaining resistors and **possible overcooling**
- D2 target out of beam for ~12 hours while experts understood issue…



D2 Cryocooler Scare - Wednesday

- Flake broke loose in cryocooler causing transient pressure spike
- To recover system, target experts switched from diffusion to rough pump
- This slightly degraded the D2 target flask vacuum -> **reduced cooling power**
- D2 target pressure is stabilized and returns to target rotation



ACNET Trouble - Tuesday-Wednesday

- Tuesday night - We lose ability to write to ACNET
  - Our 53MHz beam line Cherenkov writes beam quality variables
  - Skip this step in DAQ and notify MCR of the issue
- Wednesday morning - ACNET is completely down (at least our ability to read)
  - ACNET problem fixed after 2 hours
  - Beam returns to good quality after additional hour

Network Outage - Saturday

- Lab A lost power for planned outage at 8am - we lost connection to outside world
- Crucially this cause **inability to read information about our magnets**
  - If beam hits when KMag is down, spectrometer could be toast
- Thus we are not able to properly judge beam permit - **could not receive beam**
  - Down for ~6 hours

- Networking group attempted to reroute traffic but was unable due to lack of power
- Problem was fixed by powering Lab A with generator around 12:30
  - Special thanks to Dan and Duane (AD Ops) and Darryl (Computing) for their help

- **We need direct ACNET connection to our target-interlock system**
  - ACNET XML-RPC server not available if public network goes down