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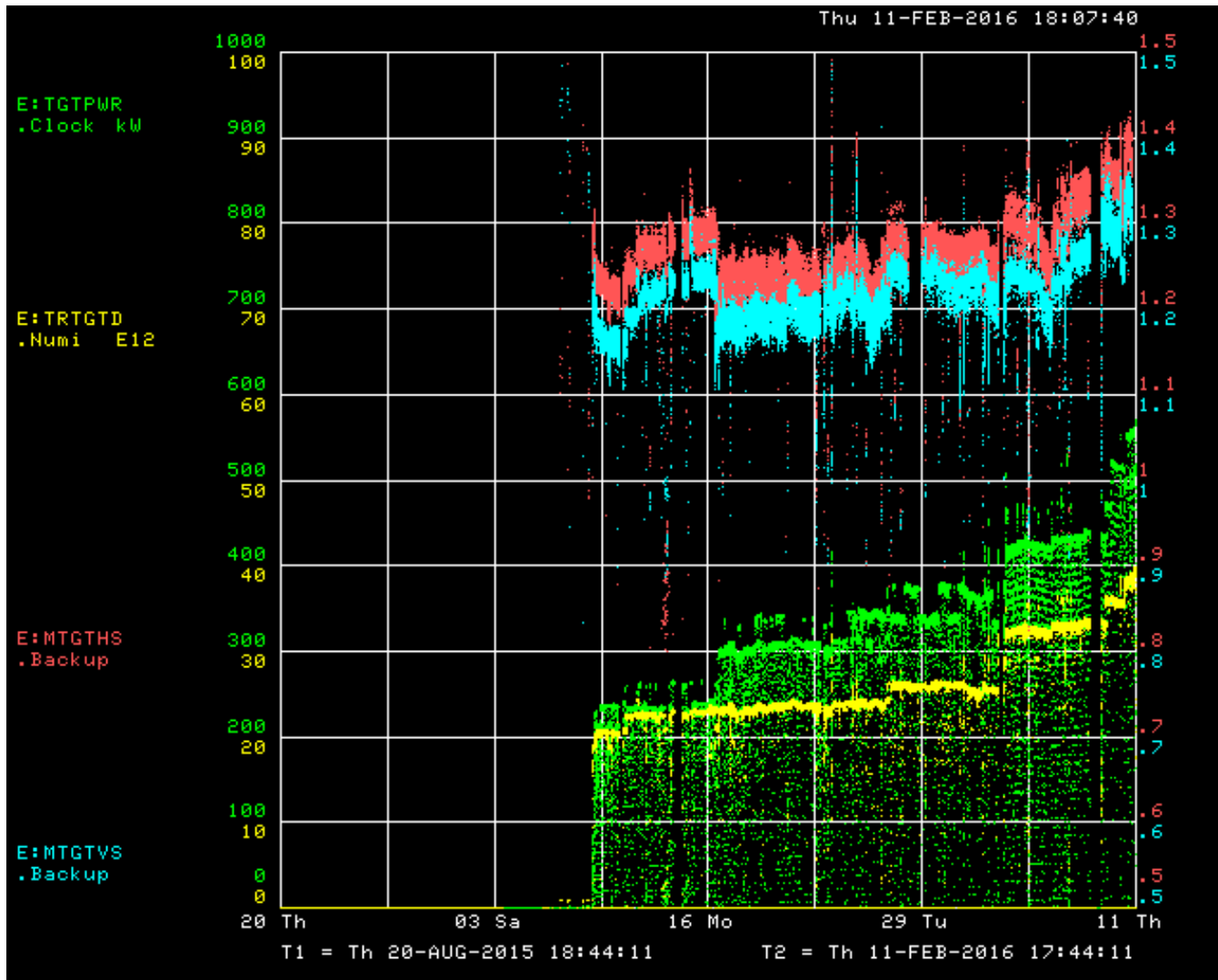
## **NuMI operation status**

Jim Hylan

NuMI operations meeting

16 February 2016

# Spot size this run -- currently rather large, recent increase



Online version

Horz RMS mm

Vert RMS mm

Multiply by  $\sim 1.08$   
to get best estimate

Now:

Horz 1.5 mm RMS

Vert 1.4 mm RMS

Design 1.3 mm RMS

Target 7.4 mm wide

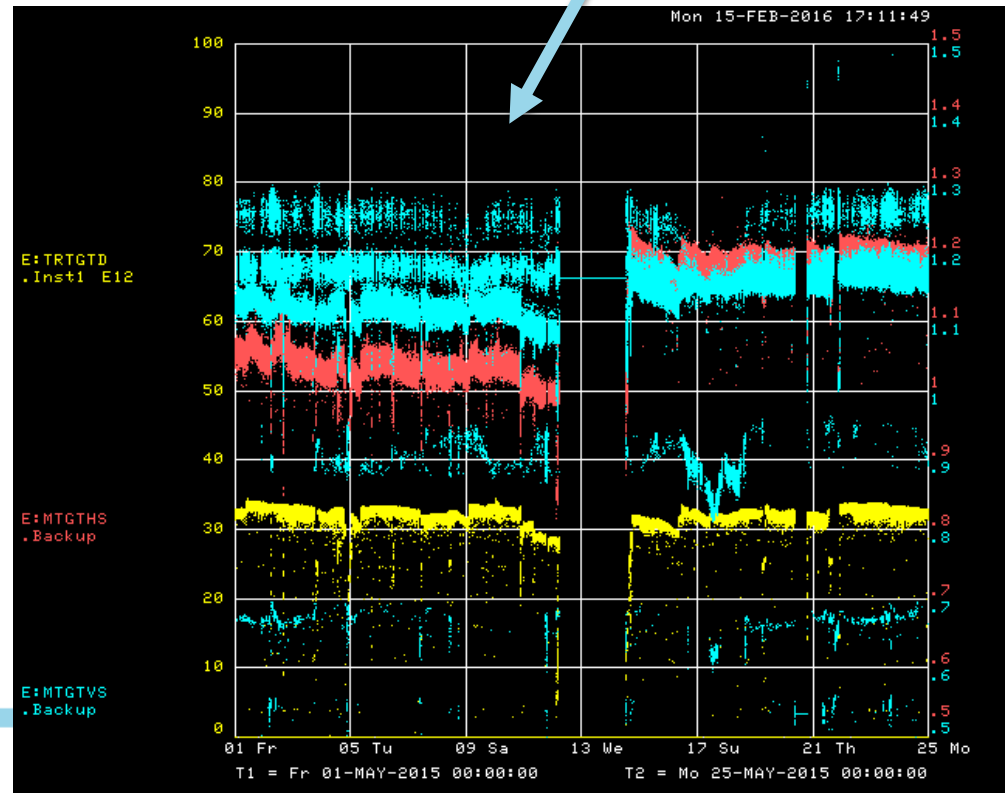
Power kW

POT/spill e12

Aug 2015 to now

# Spot size adjustment ?

- The spot size is somewhat larger now
  - As accelerator tunes up, this should get smaller
  - but as intensity goes up, this can get larger
- If it gets larger, *or if experiments say it is too large now*, we can change the NuMI optics back to a tighter focus, the quad settings we had back in 2013.
- This may reduce horizontal by  $\sim 13\%$ , vertical by  $\sim 4\%$
- Larger spot than nominal:
  - some beam misses target
  - some spectrum shift
  - **NO obvious effect on muons yet**
- Smaller spot at high intensity:
  - Target overstressed, can break
- Feedback on spot size effect from experiments would be useful

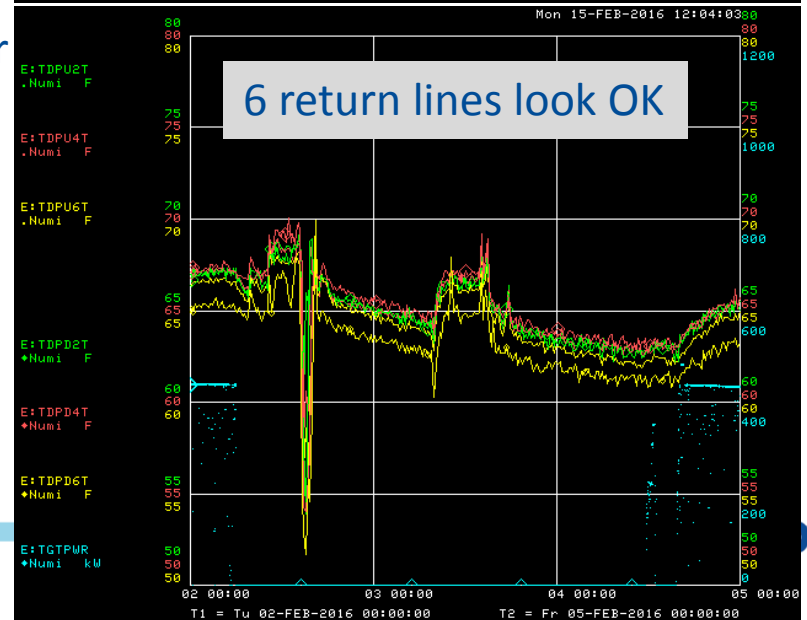
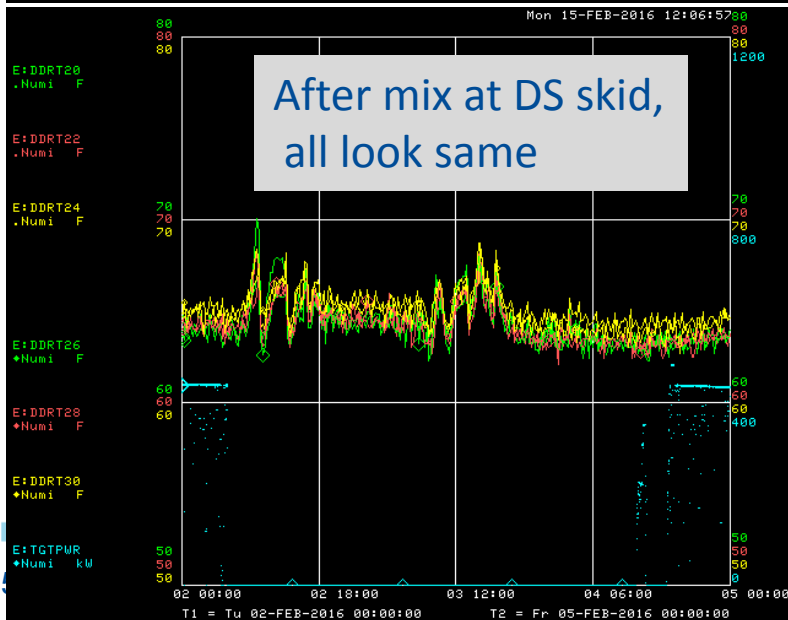
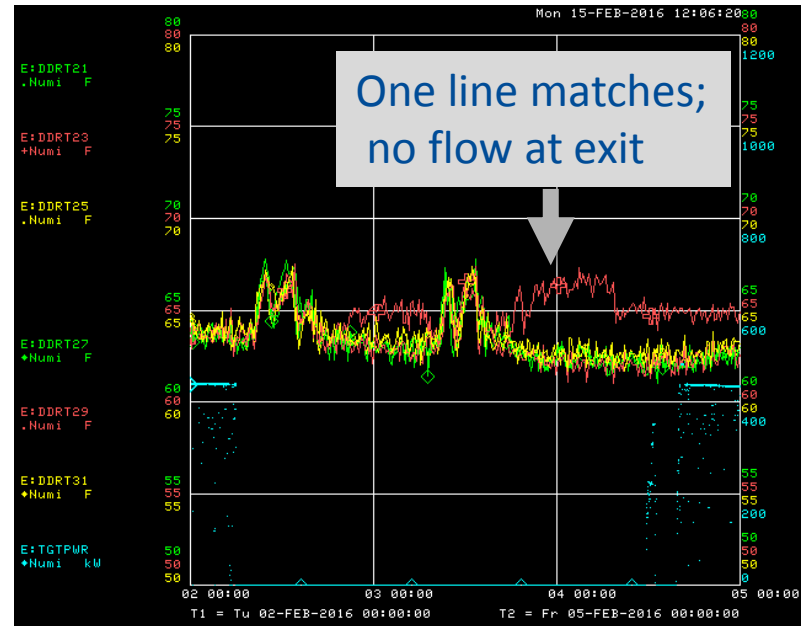
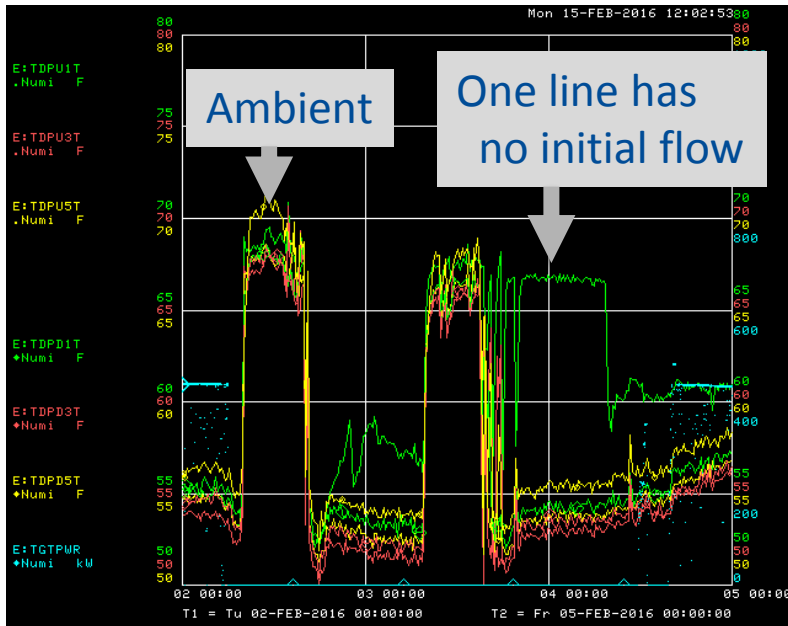


# Current Decay Pipe cooling problem

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- Heat exchanger is partially clogged
- Getting reduced flow ( 24 gpm -> 17 gpm)
  - especially on one of the 12 cooling lines
- Will clean out heat exchanger at next 10 hour opportunity
- New heat exchanger also on order

# DK cooling line temperatures during system drain/fill



# DK cooling line temperatures since system drain/fill

