

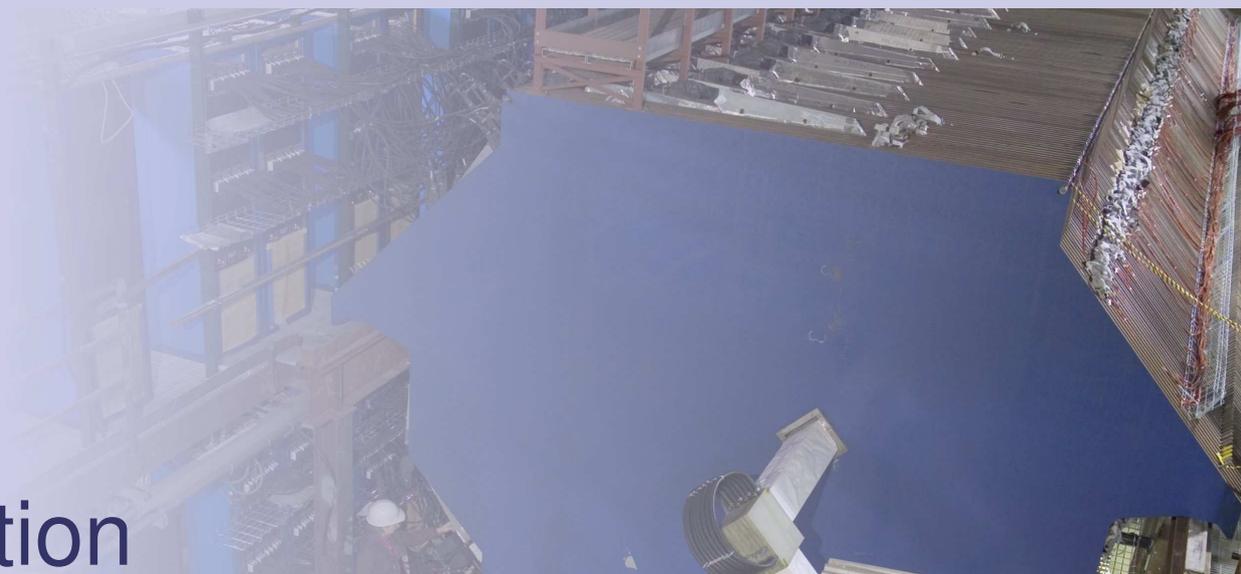
# NuMI-MINOS status report

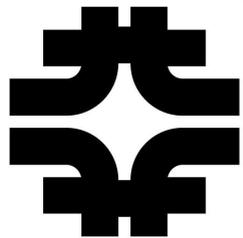
Phil Adamson

University College London  
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for the

MINOS collaboration



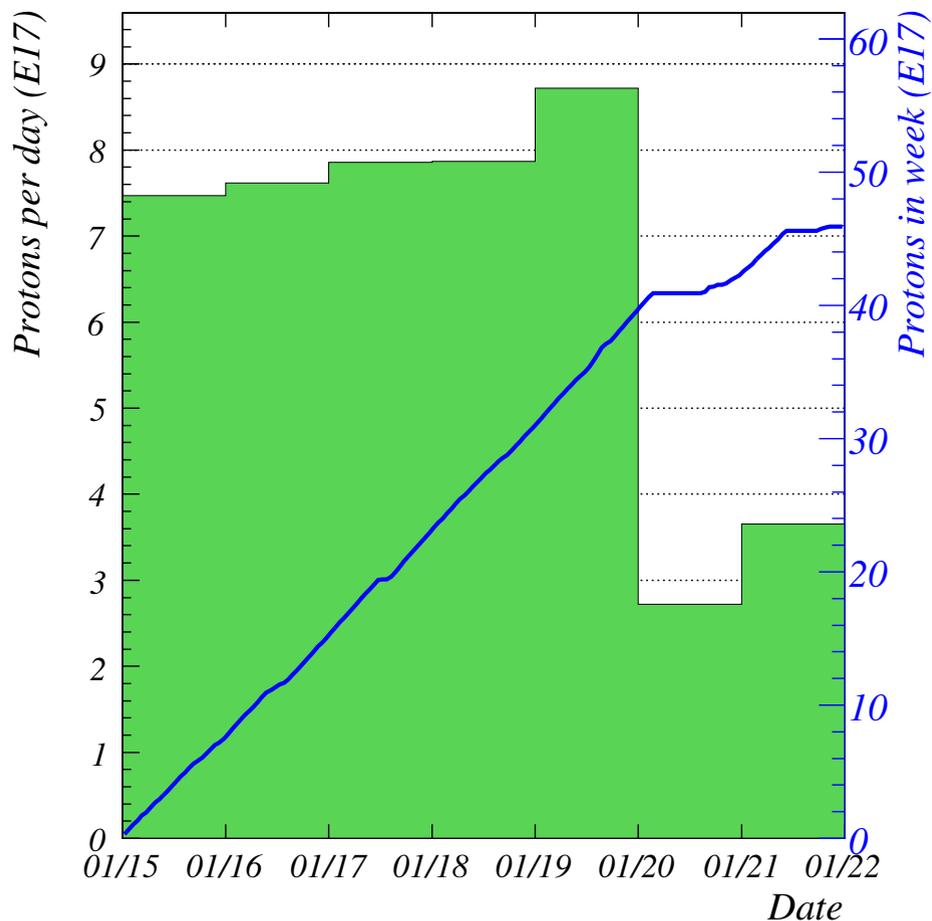


# This week

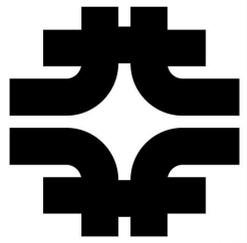
P. Adamson  
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Fermilab Accelerator Division



Week to 00:00 Monday 22 January 2007



- ▷ This week continued our recent month-long spate of good running
- ▷ Things went horribly wrong on the weekend
- ▷  $4.58 \times 10^{18}$  protons this week
- ▷ Two different proton source problems
  - ⇒ Running at about half normal intensity this morning
  - ⇒  $H^-$  repairs will hopefully improve things
- ▷ Detectors running well
  - ⇒ Near detector 99.3% efficient
  - ⇒ Far detector 99.5% efficient
- ▷ Total protons since summer shutdown:  $0.98 \times 10^{20}$

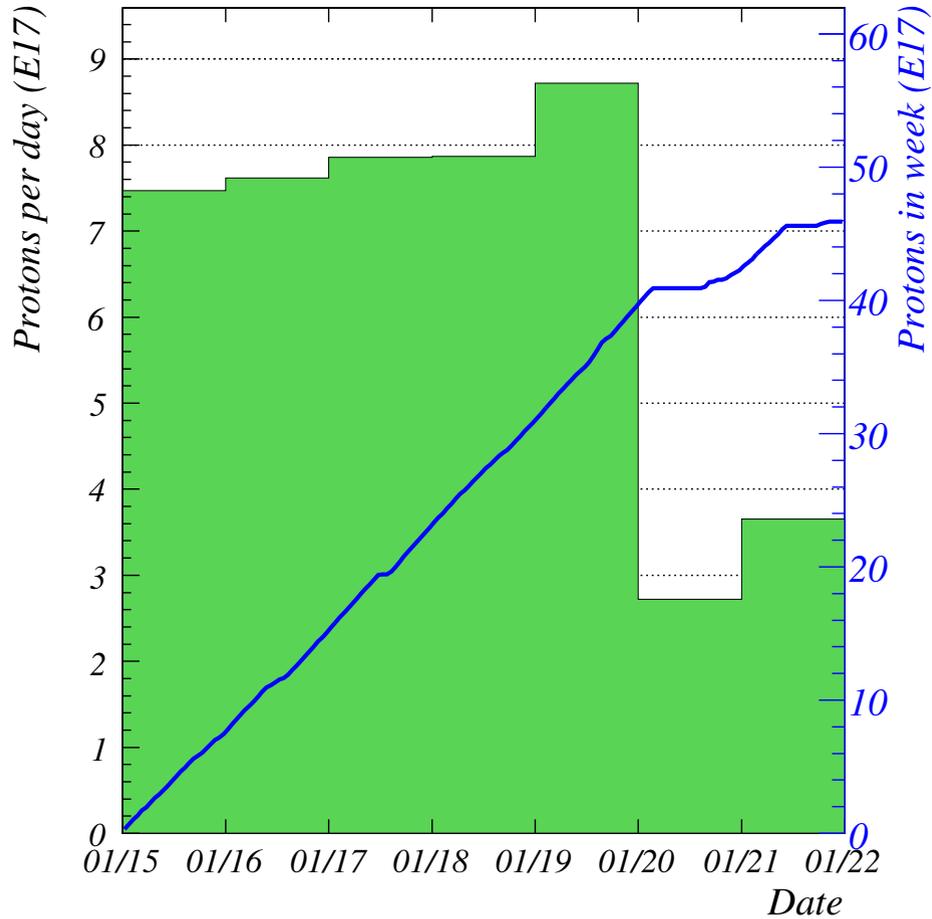


# This week

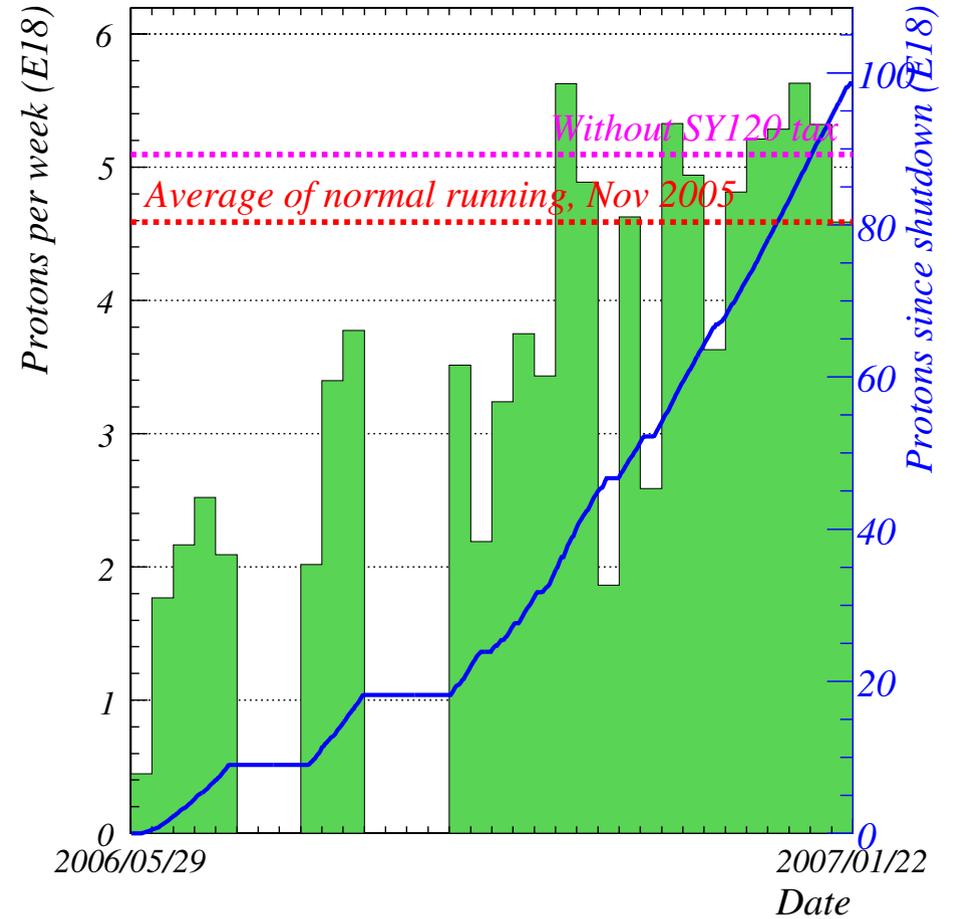
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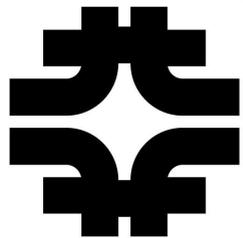


Week to 00:00 Monday 22 January 2007

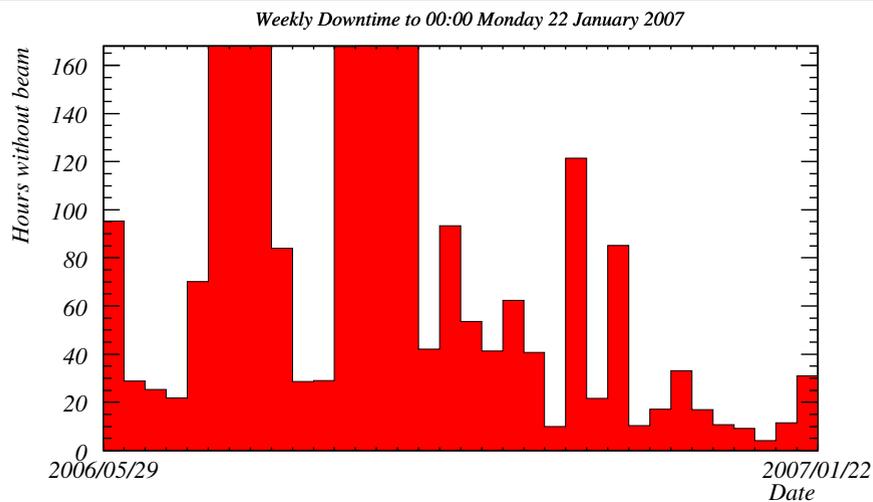


Weekly protons to 00:00 Monday 22 January 2007

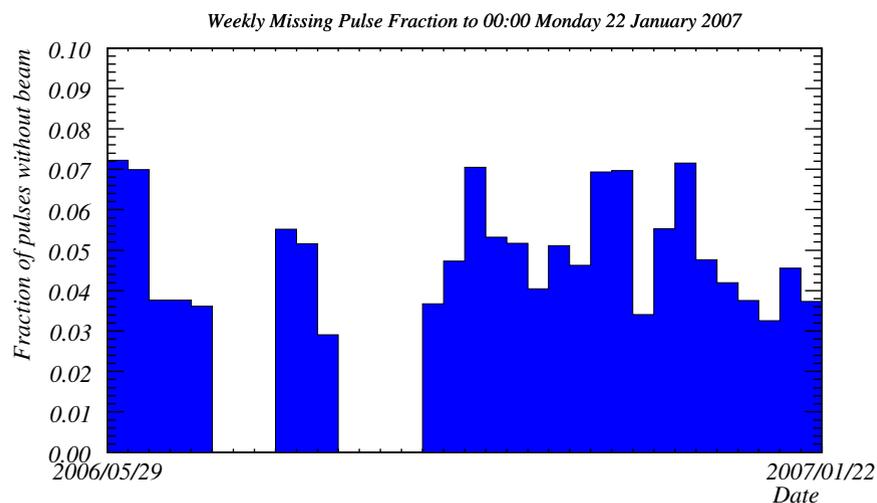


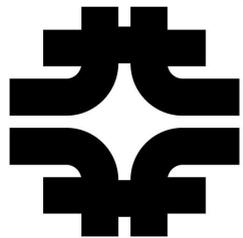


# Weekly Downtime



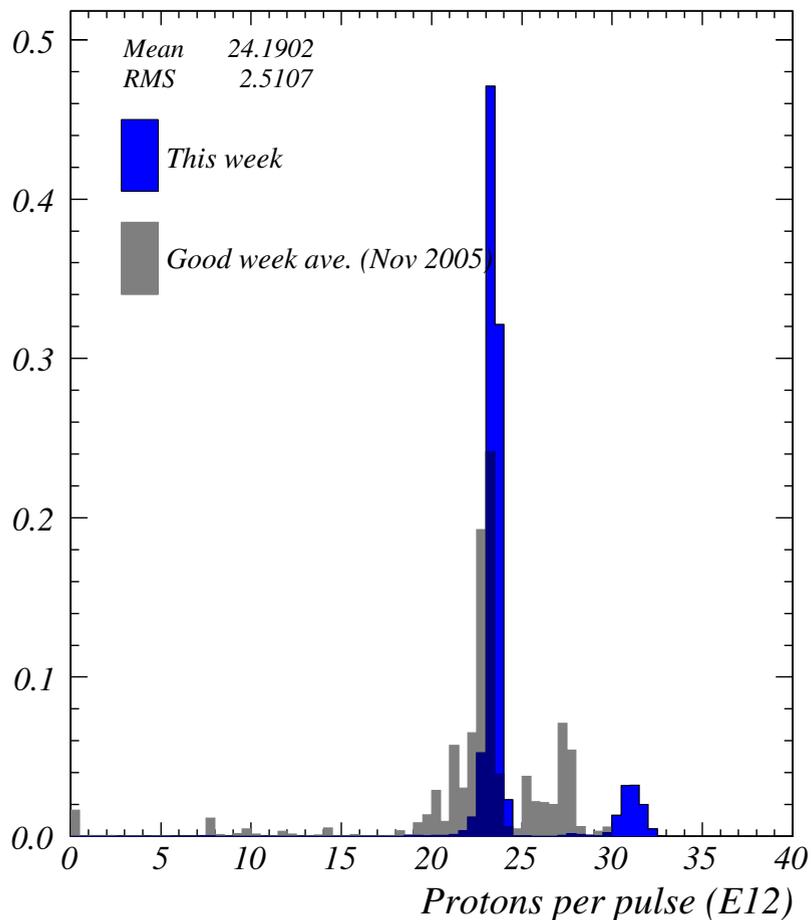
- ▷ Top plot—downtime ( $> 5$  minutes) in hours/week
- ▷ Bottom plot—fraction of pulses missed ( $< 5$  minutes consecutive downtime)



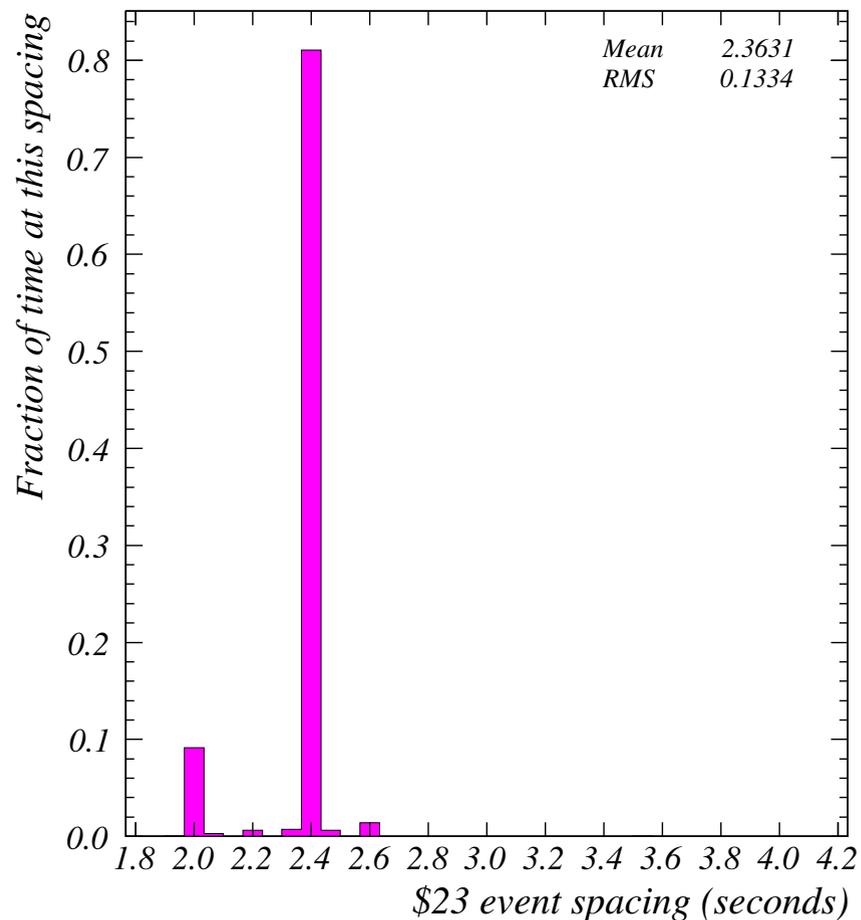


# In detail...

Week ending 00:00 Monday 22 January 2007

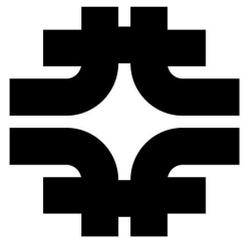


Week ending 00:00 Monday 22 January 2007



- ▶ Good per-pulse intensity continued
- ▶ Mean 24.2 E12 protons per pulse

- ▶ Mean cycle spacing 2.36 s



# Prospects for more beam

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- ▶ Antiproton source department are in the middle of studies preparatory to running with a 2.2 s cycle spacing
  - ⇒ These should be complete in about a week
- ▶ Then try running operationally with a 2.2 s cycle spacing—10% gain in POT for NuMI
- ▶ Other big source of potential improvement is slip-stacking for NuMI
  - ⇒ New 11-batch slip-stacking mode that fits in a 2.2 s cycle to be tested
  - ⇒ Need MI collimators for big gains (after shutdown)