

Minerva AEM Update

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Minerva Operations Group

22 February 2016



UNIVERSITY of
ROCHESTER



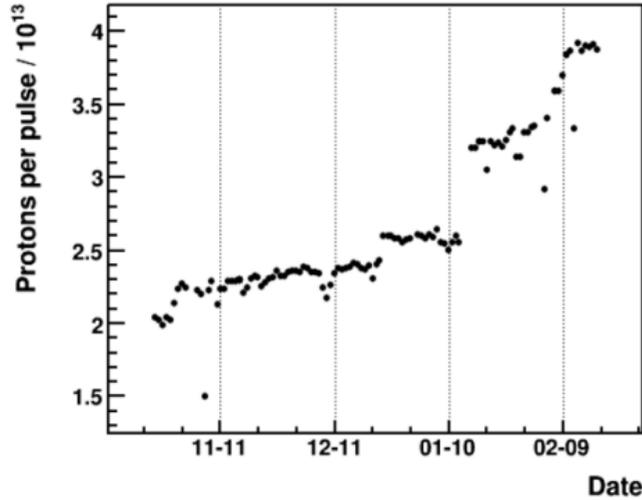
Livetime: 11-17 February 2016

- We're experiencing a technical difficulty producing our livetime plot
- We've done a manual check of DAQ up-times for each day: 11-17 Feb
- Qualitatively:
 - Minerva efficiency is high
 - MINOS efficiency is low
- MINOS inefficiencies were reported on last week by Donatella, and we'll hear an update today

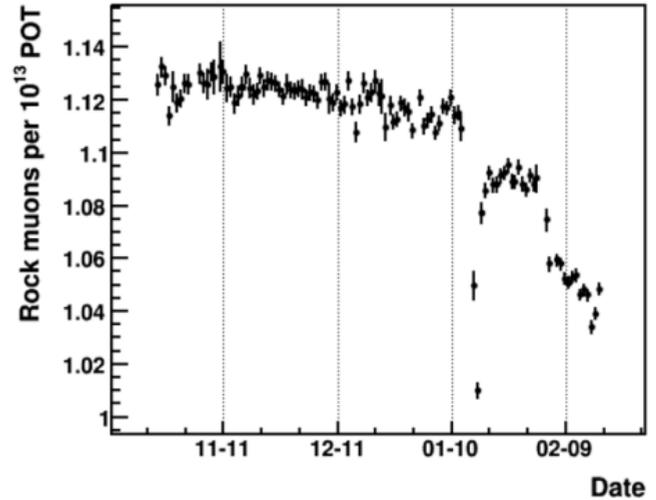
Hardware Updates

- The detector is in great shape
- Our water target was filled this morning - a successful operation all around (special thanks to John Voirin and Tim Griffin of PPD!)

Rock Muons/POT

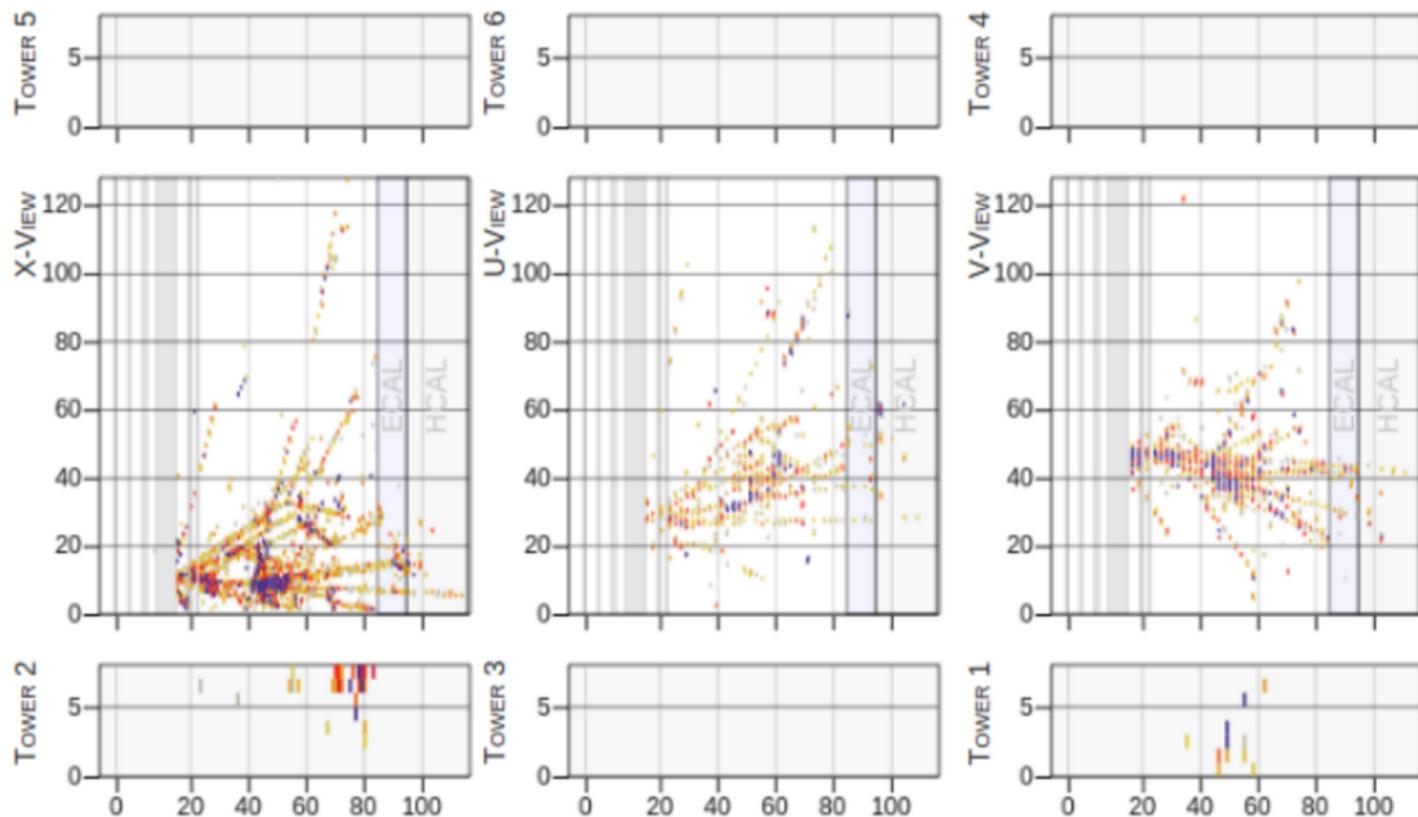


POT/Pulse



Rock Muons/POT

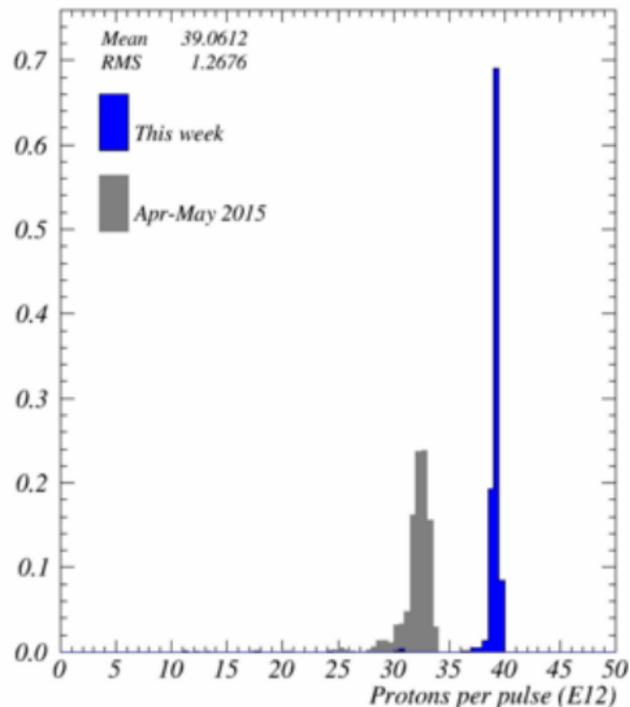
n.b. The higher proton power from 4+6 slipstacking is causing a decrease in rock muon tracking efficiency



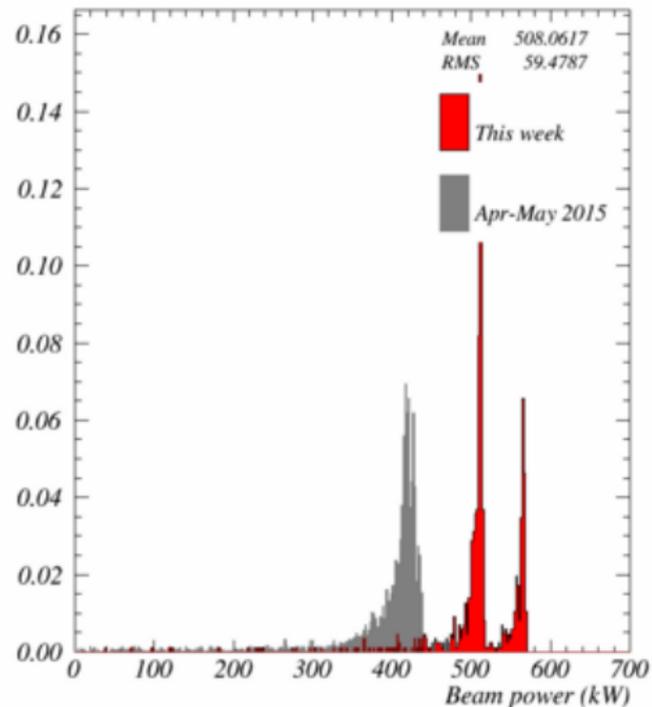
candidate DIS event in water target

NuMI Beam Plots: 15-21 February 2016

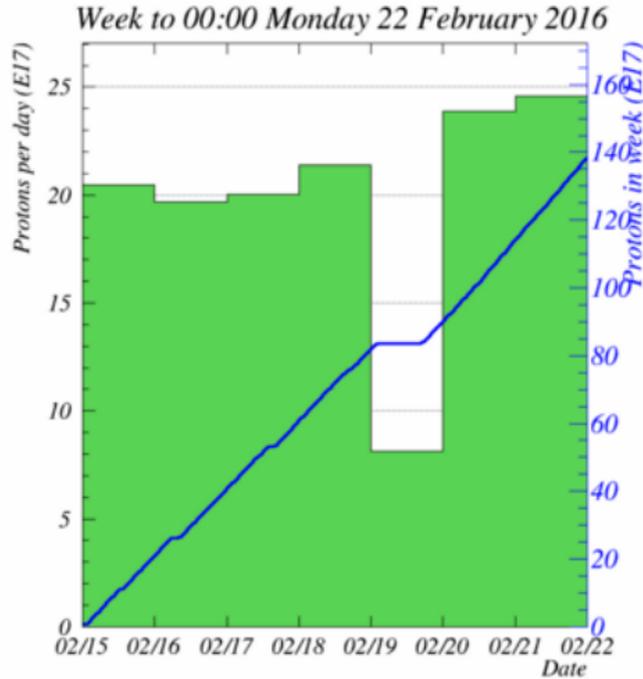
Week ending 00:00 Monday 22 February 2016



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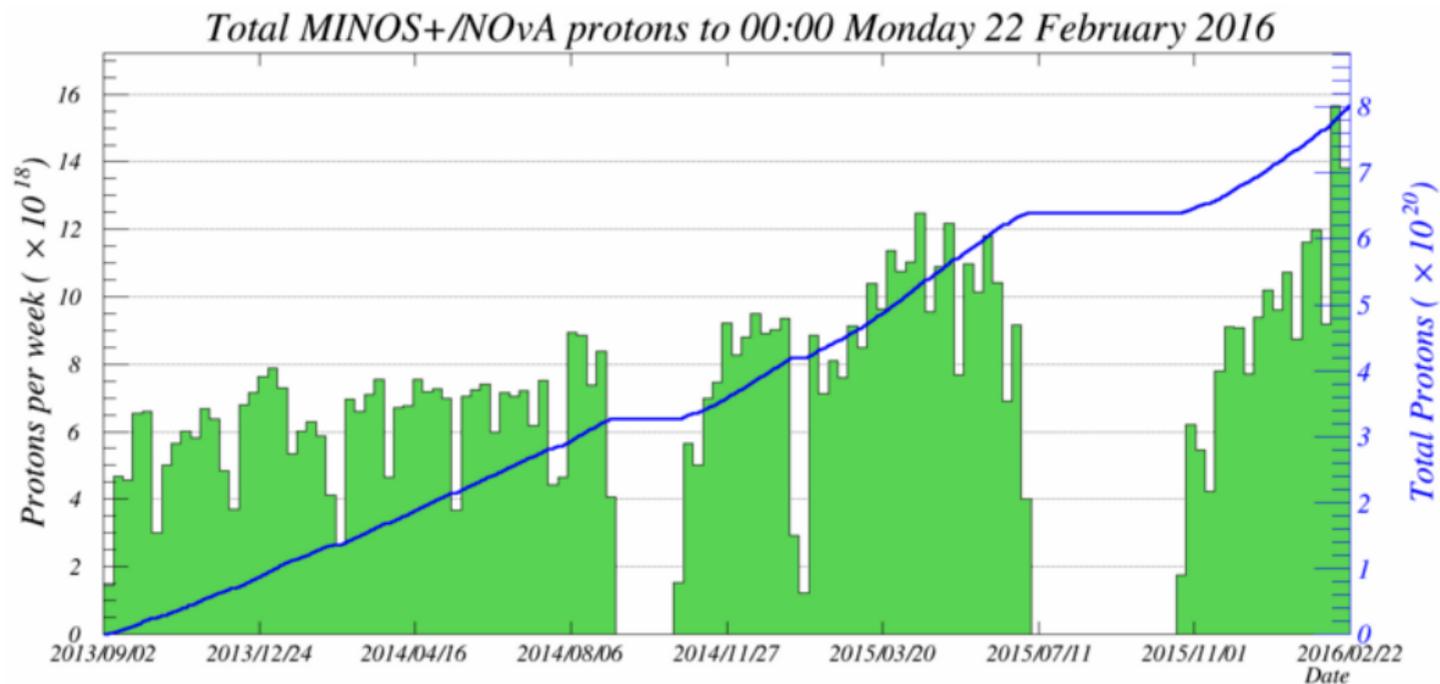


Cumulative Protons: 15-21 February 2016



1.38E19 POT

Cumulative Protons in ME



8.00E20 POT

BACKUP

Owl Shifts

- We have implemented an automated DAQ “watchdog” – In the event of a DAQ failure, the expert-on-call is paged 6 minutes after the initial failure
- The watchdog has been continuously tested for the past 6 weeks and, as far as we’re aware, has a 100% success rate
- We are now trial-ing a shifter-less owl shift system, wherein the owl “shifter” arrives to complete shift checklists at 06:00
- All known failures of the DAQ which take place overnight require expert intervention, and this historically takes place on the 6-minute timescale
- Data-quality problems which begin overnight are typically not fixed until the morning, if they do not stop the DAQ – if there’s a serious problem, it’s not going to be fixed, whether or not there’s a shifter