

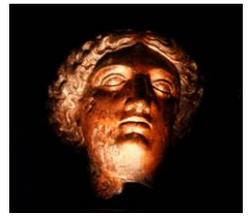
# The MINERvA Operations Report

## All Experimenters Meeting

Howard Budd, University of Rochester  
Nov 3, 2014



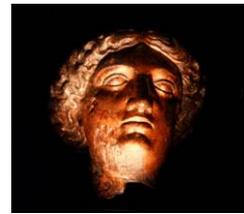
# Low Intensity Run



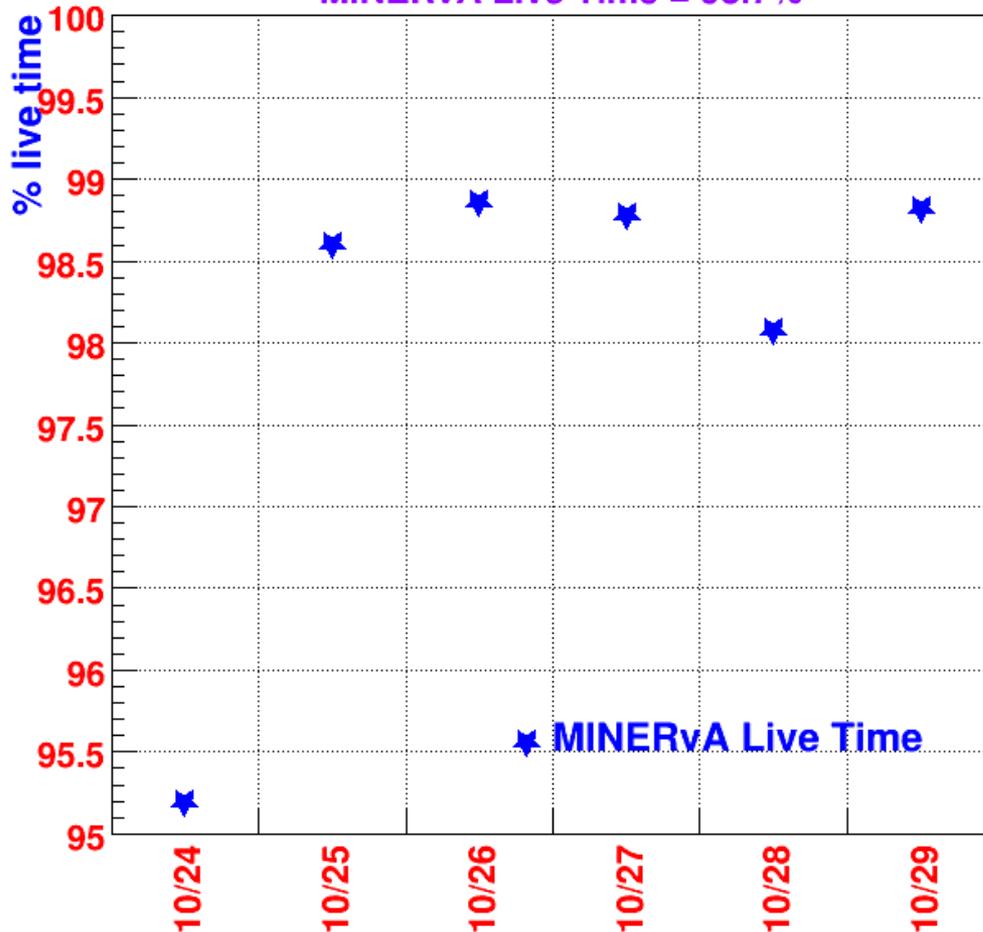
- We would like to thank the AC for the Low Intensity Run,  $1.2 \times 10^{13}$  POT/pulse, from Oct 30 to Nov 3.



# $\nu$ Data



Oct 24 to Oct 29,  $0.45 \times 10^{19}$  POT Delivered  
MINERvA Live Time = 98.7%



- Live time Oct 24-29.
- Live time of 98.7%
- The ACNET timing crate which supplies both MINOS and MINERvA with the neutrino gate time had its parameters set to zero. This was due to the previous power outages. The CAMAC Crate was reset and we got triggers at the proper time. This caused the inefficiency on 10/24.



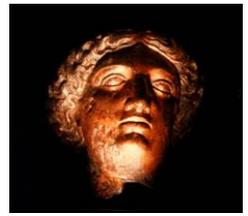
# CROC-E Firmware Upgrade



- CROC-Es were reinstalled on Oct 21 after a Firmware upgrade.
- As reported last week:
  - Every so often the DAQ would crash with a sequencer error
    - The sequencer is the firmware code in the CROC-E which reads out the FEBs. This code used to be in the DAQ code. Putting this code in the CROC-E speeded up the DAQ
  - This would cause bad data for the rest of the run, but would not stop the run.
    - The bad data is seen by the nearline system
  - A fix was put in to skip to the next subrun when there was a sequencer error. The event with the bad data was not saved. The data in the new run was fine. Therefore all data for a run were good
  - This introduced very small dead time ( $\sim 0.2\%$ ) as seen from the efficiency plots.



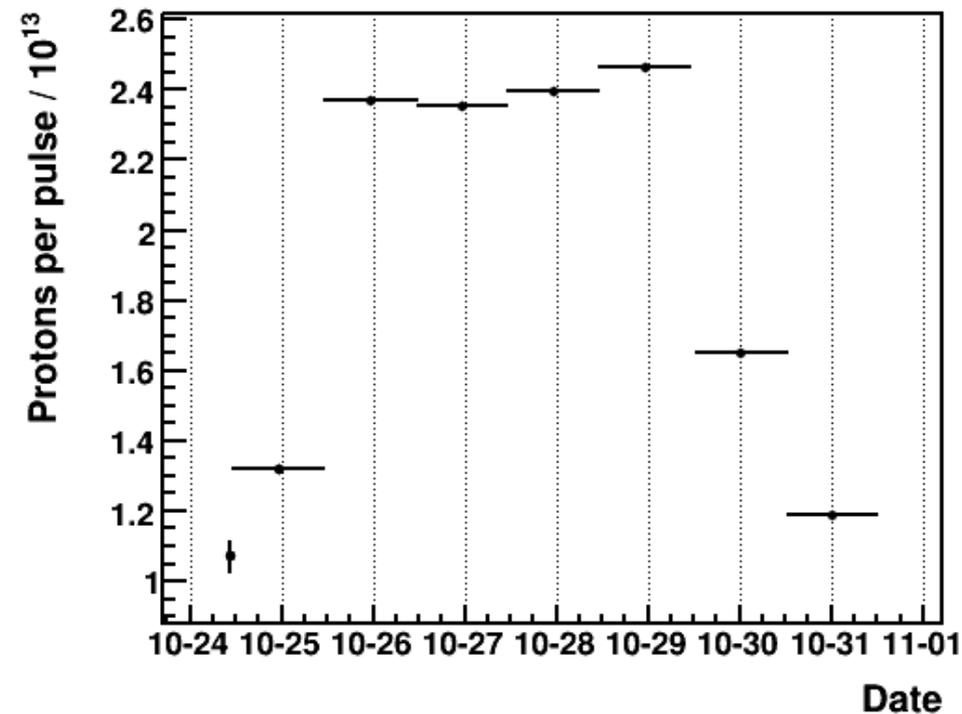
# CROC-E Firmware Upgrade



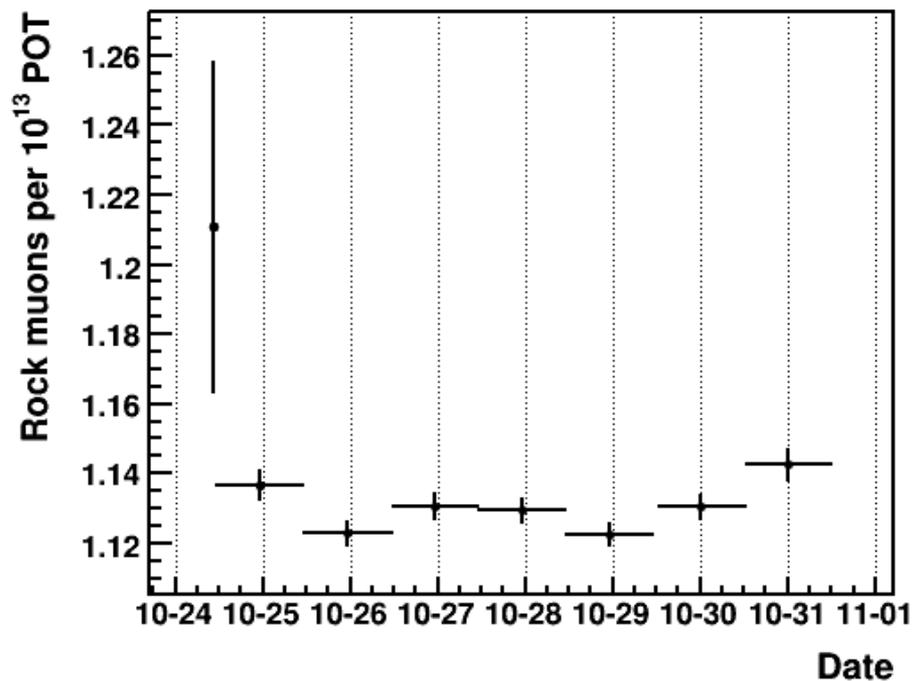
- However, this fix may have inadvertently introduced a small bias in our data as a number of very high multiplicity or energy events may not be saved.
- We are investigating this problem. We should have a software fix for this problem tomorrow.
  - Tomorrow, we will decide whether to employ it immediately or wait a day or two.



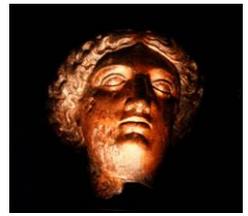
# Rock Muons/POT



POT/Pulse

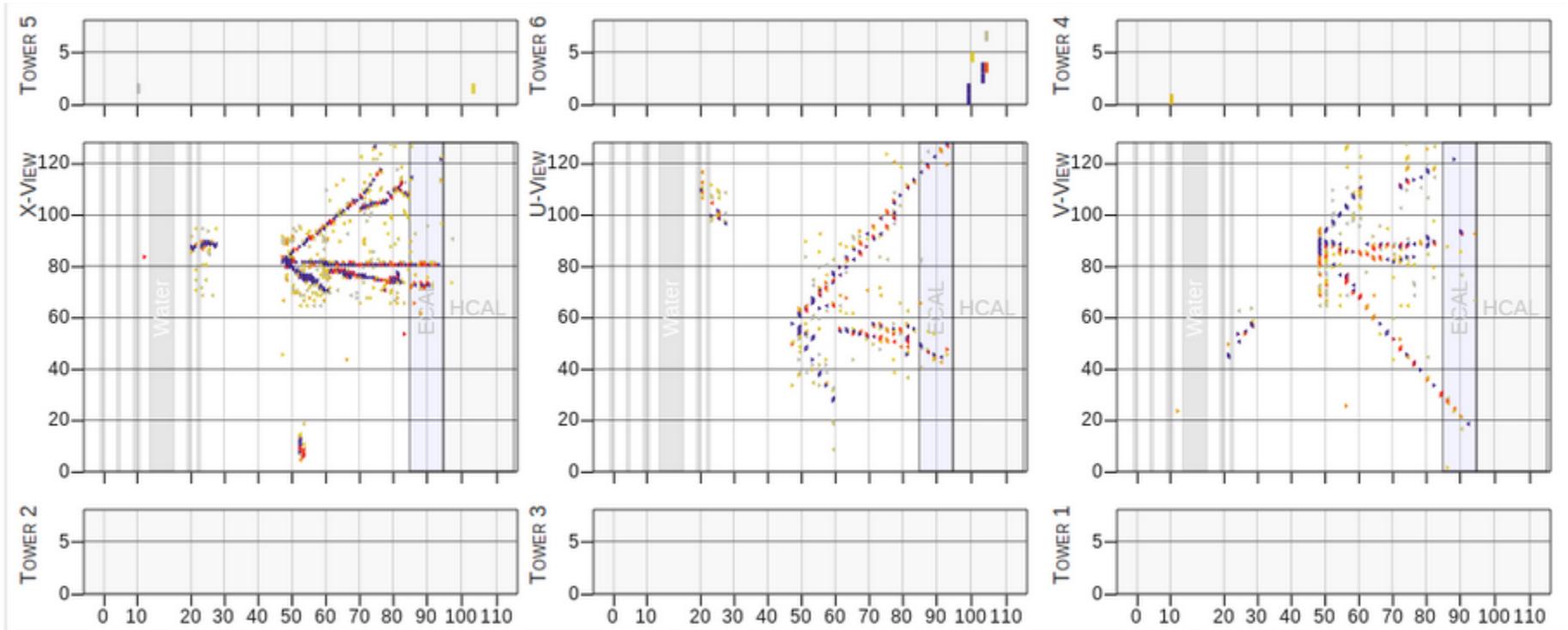


Rock Muons/POT



# Event Display

Outer Calorimeter



Tracker Event



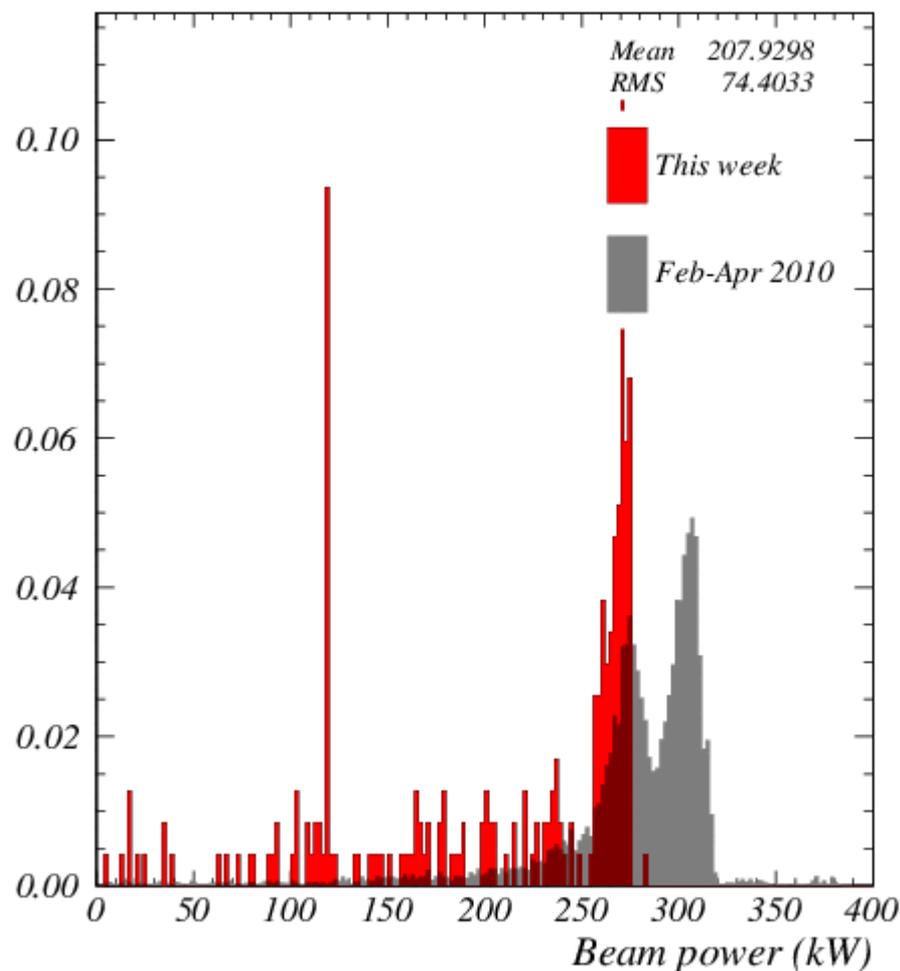
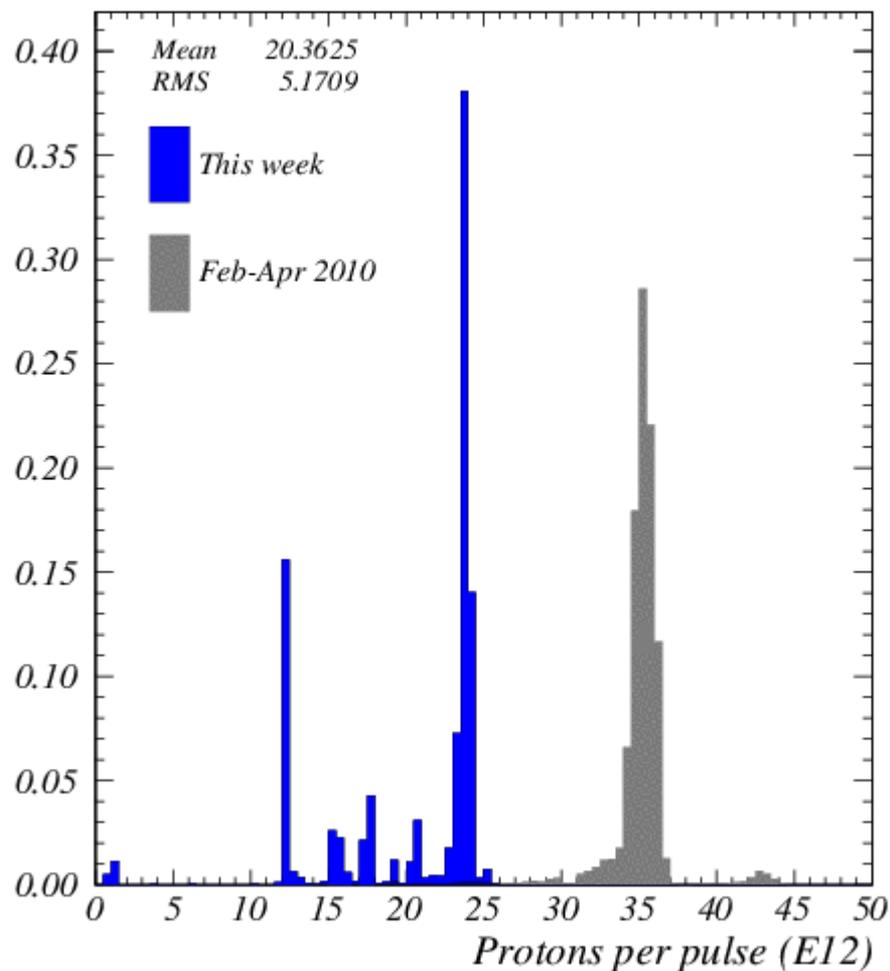
# NuMI Beam Plots

## Oct 24-26



Week ending 00:00 Monday 27 October 2014

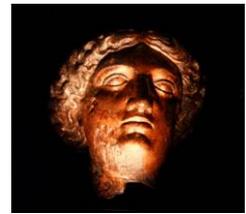
Week ending 00:00 Monday 27 October 2014



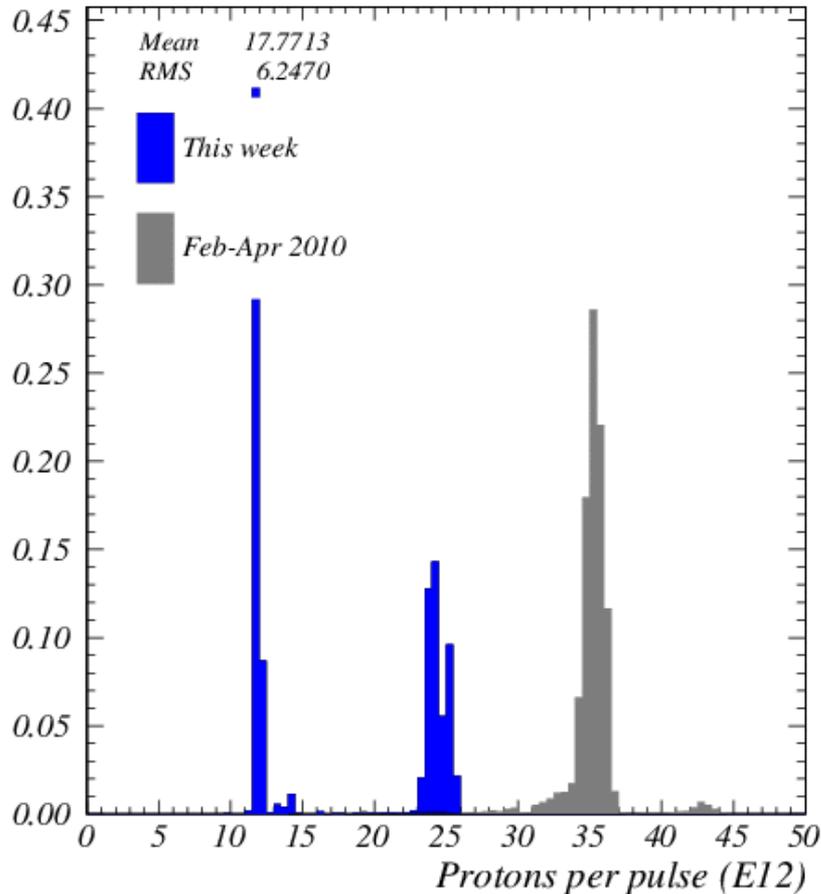


# NuMI Beam Plots

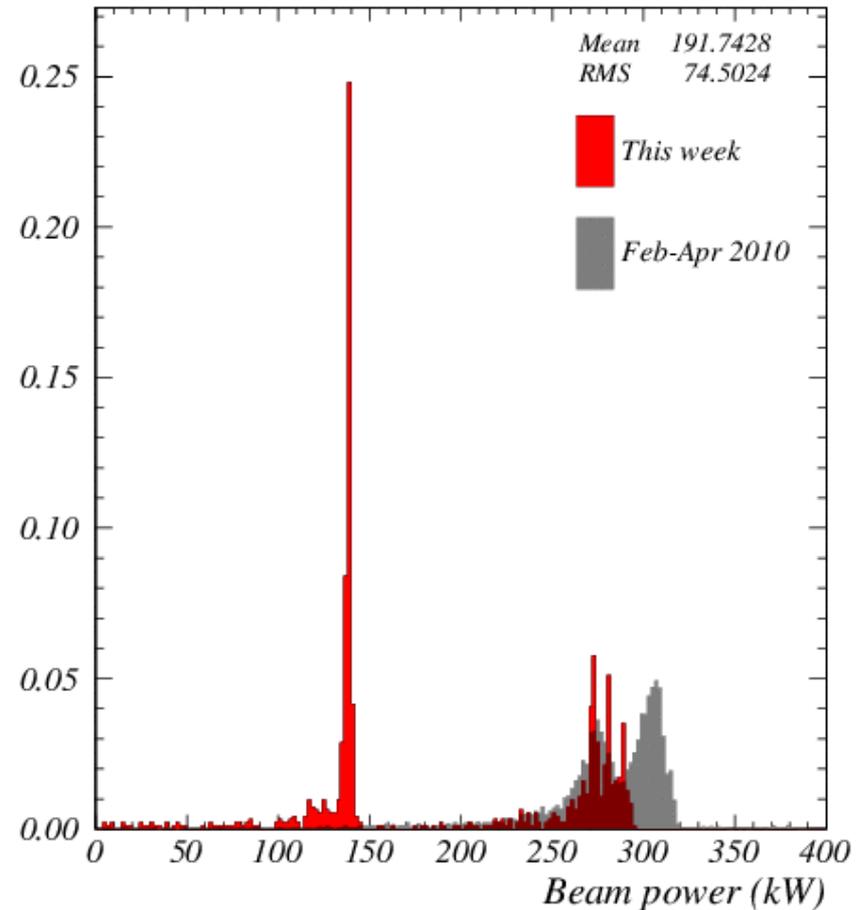
## Oct 27 – Nov 2



Week ending 00:00 Monday 03 November 2014



Week ending 00:00 Monday 03 November 2014



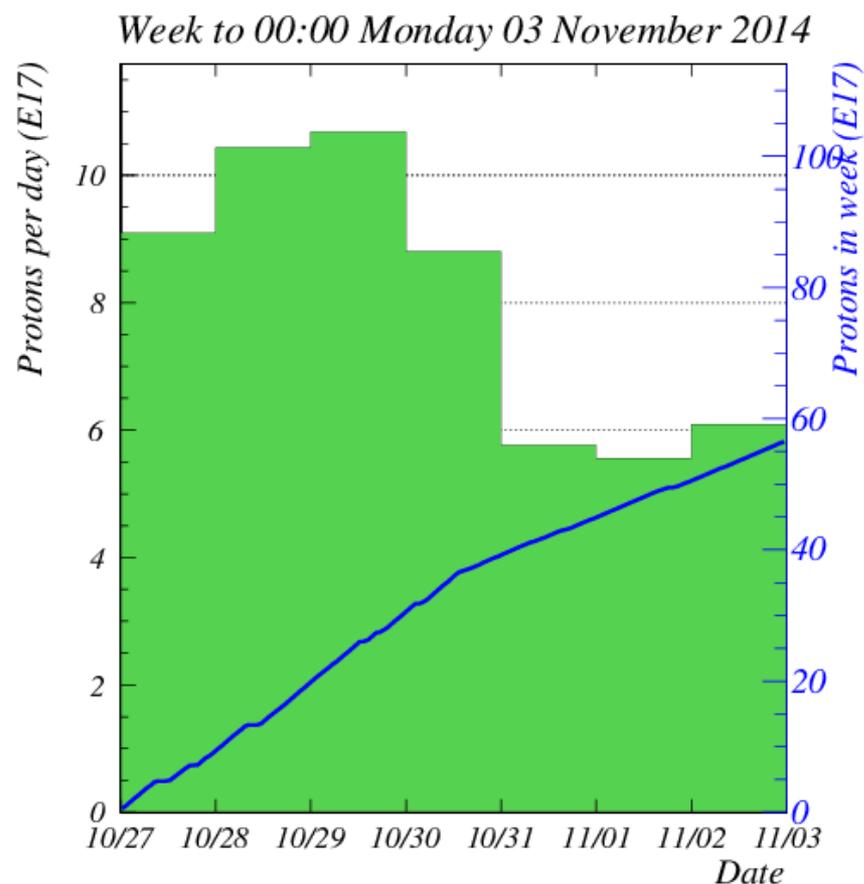
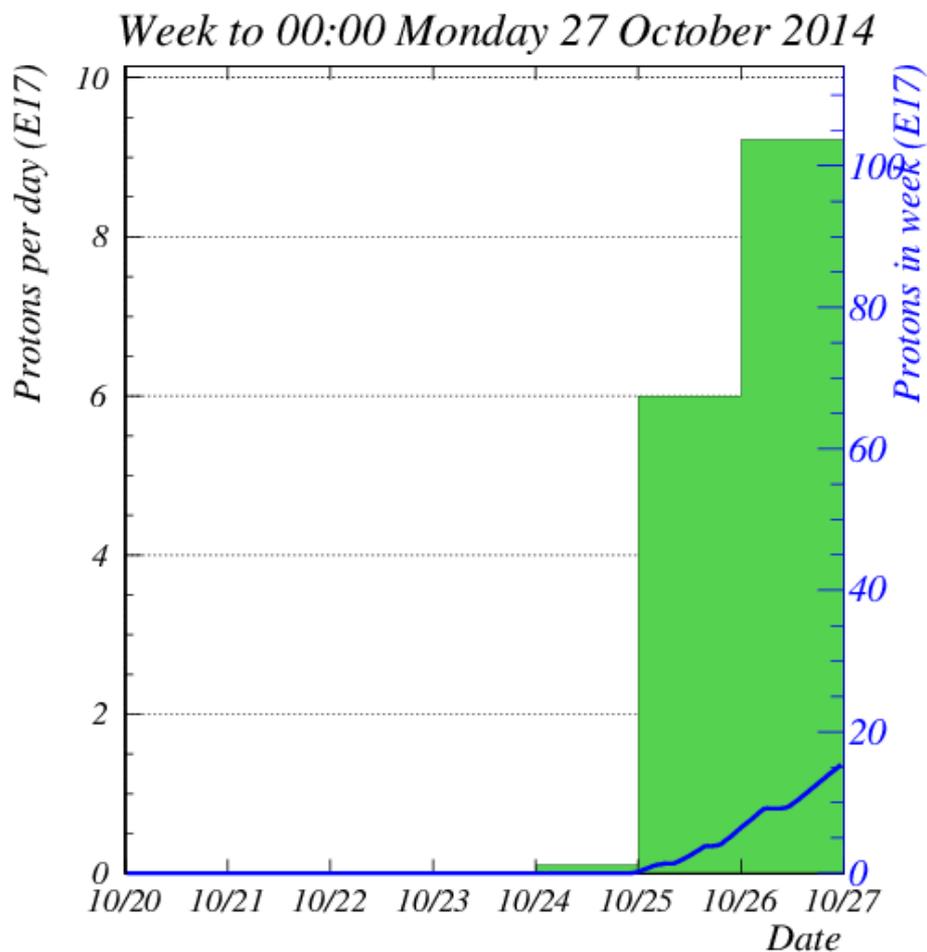


# Protons for the Week



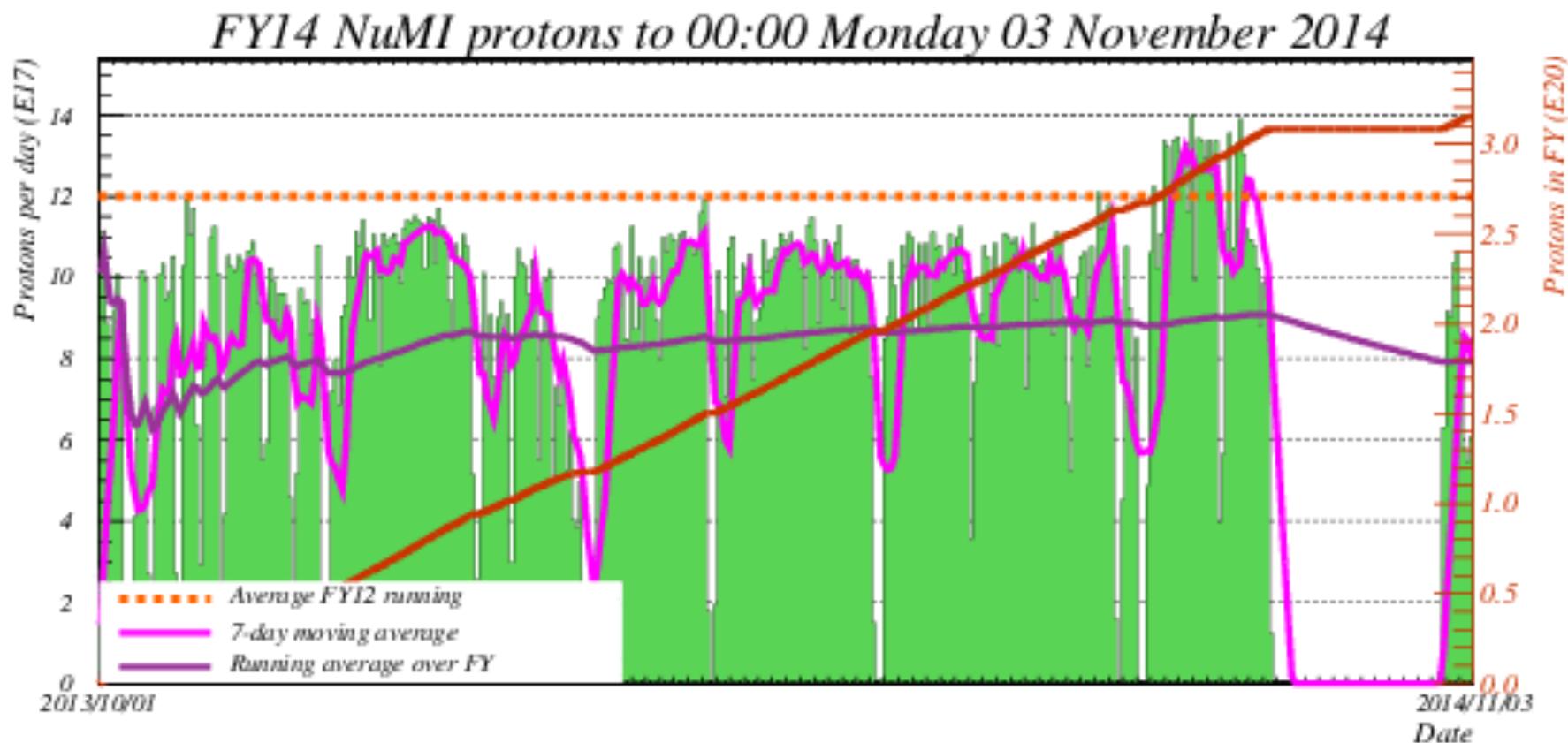
$0.15 \times 10^{19}$  POT Oct 24-26

$0.56 \times 10^{19}$  POT Oct 27-Nov 2





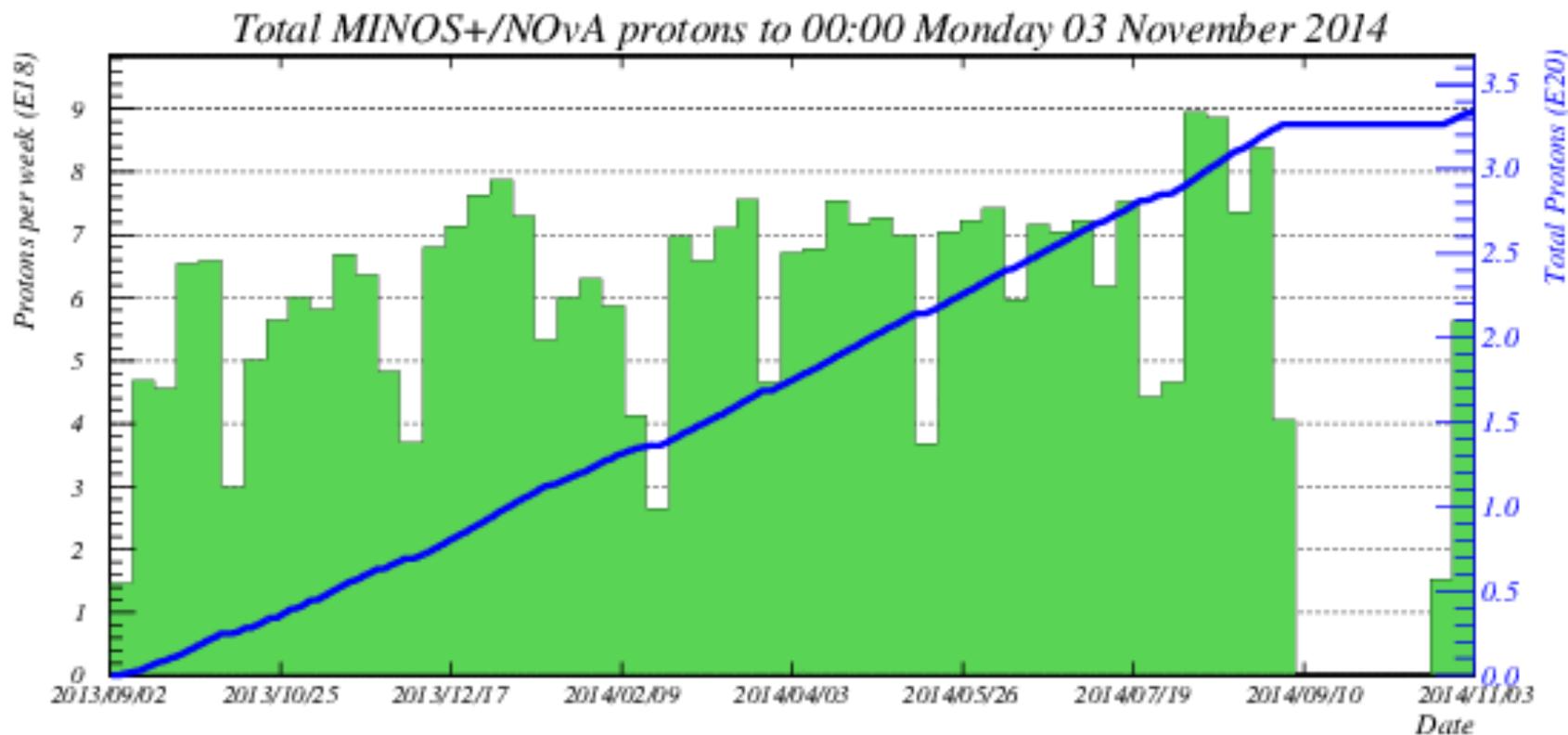
# FY2014 Protons



$31.55 \times 10^{19}$  POT  
Oct 1 2013 - Nov 2 2014



# Protons for ME Run



**$33.32 \times 10^{19}$  POT**  
**Sep 6, 2013 at 15:00 – Nov 2, 2014**