The MINERνA Operations Report
All Experimenters Meeting

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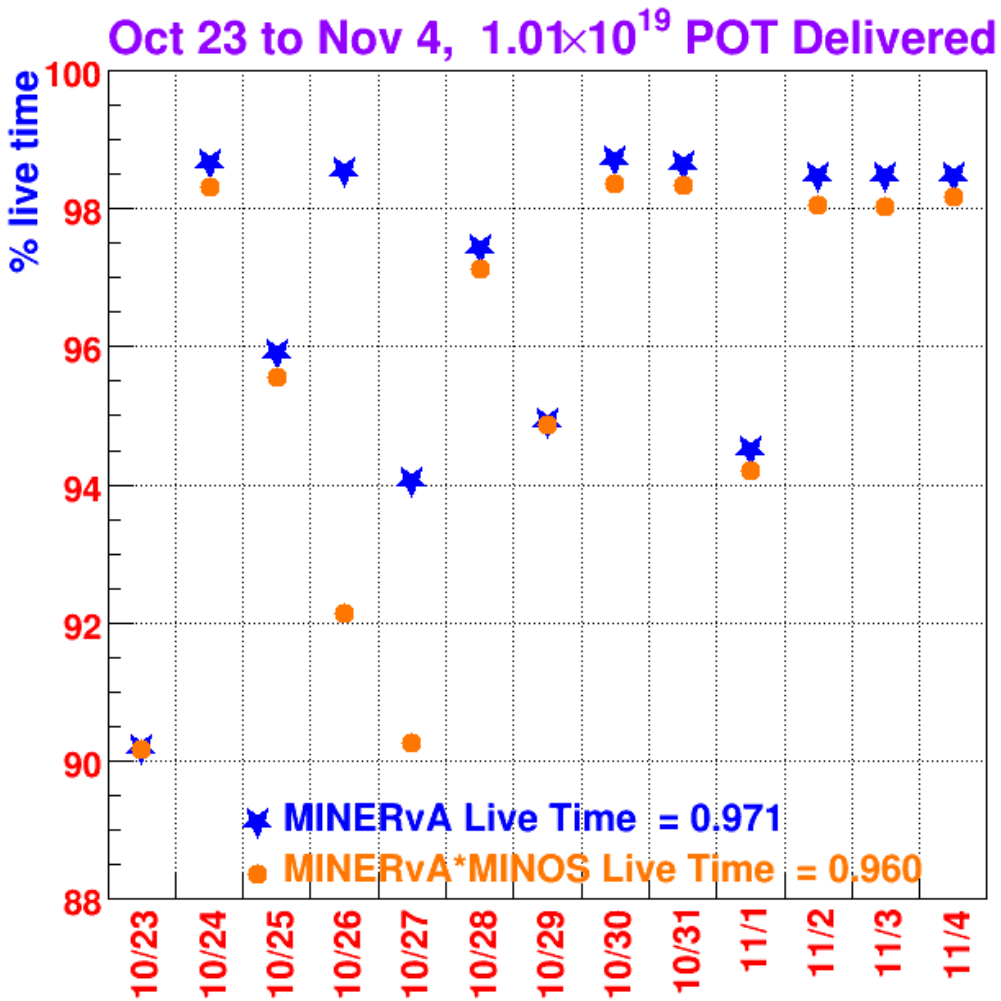
Nov 9, 2015

ν Data



- Live time, 10/26-11/4, 2015
- 1.01×10^{19} POT
- MINERvA 97.1%
- MINERvA*MINOS 96.0%
- Oct 25 – 95.9%
  - Keepup hasn't processed all the data.
- Nov 1 – 94.5%
  - Uptime claimed there was not downtime, so its not clear why the live time was lower.
  - We spent 6 minutes doing a chain reset due to bank errors on that chain

FEB/PMT 1-7-1-2 Problem

- The live times on the following days were lower due to the investigation of this problem
  - Oct 23 - 90.2%
  - Oct 27 - 94.0%
  - Oct 29 - 94.9%
- 1-7-1-2 means Crate 1, CROC-E 7, Chain 1, Board 2
- One of the online plots was showing a “red” distribution for PMT/FEB 1-7-1-2.
  - We replaced the FEB twice.
  - We swapped cables on the chain and between chains. In addition, we swapped the cables going to the CROC-E, the readout module in the VME crate. These tests demonstrated that the problem was associated with the PMT.

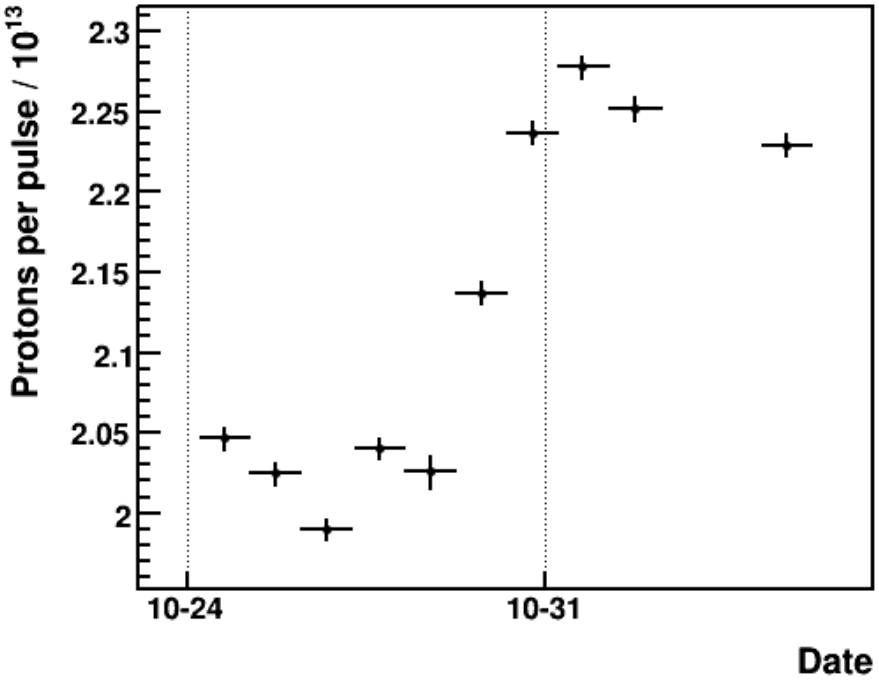
FEB/PMT 1-7-1-2 Problem

- The problem shows up as ADC data which does not make sense, similar to the v95 ADC problem. Medium and High Gain channels for a pixel are not correlated. In addition the Low Gain Channel for a pixel are near maximum value. Maximum value should never show up for the low Gain Channels.
- The problem showed up in other PMTs, but not as often. In addition the problem showed up in the veto FEB boards
- The problem was traced to an unpacking problem related to events with > 8 hits. V95 increases the number of hits the trip chips can store from 8 to 20. We now have fixed the unpacking code and it will be installed during the shutdown. The raw data is fine.
- PMT 1-7-1-2 has a hot pixel, not caused by a light leak. We will determine if the PMT needs to be replaced after the new unpacking code is installed. A hot pixel can causes excessive dead time for a PMT. The Veto has a large number of hits, but they are real hits.
- Thanks Donatella Torretta for addressing the unpacking problem.

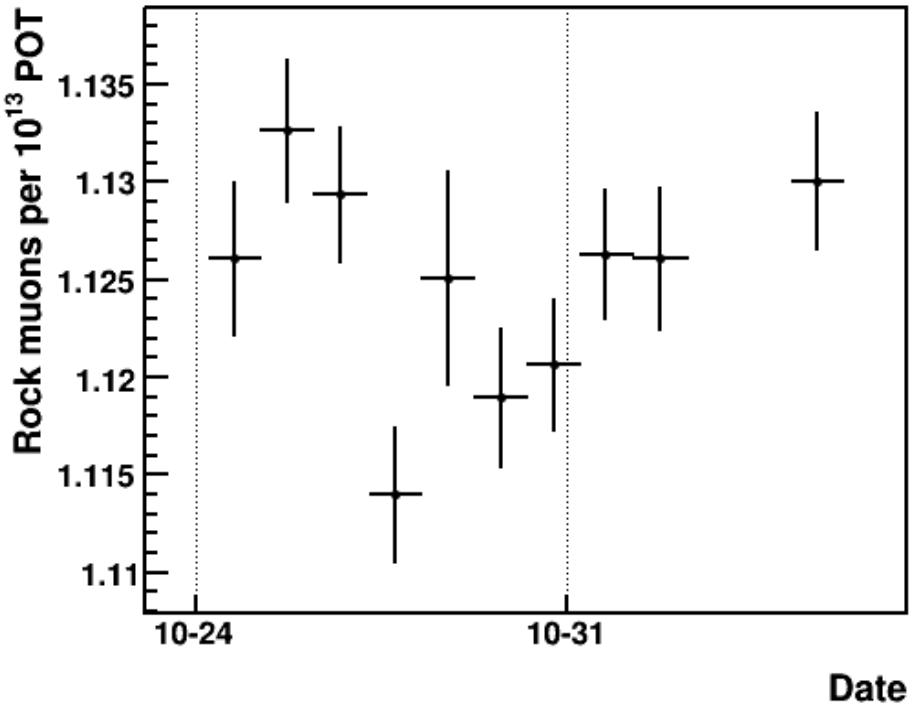
Nov 9-10 Shutdown

- We are replacing the network switch in the MINERvA DAQ rack and MINERvA hot spares rack.
  - The network switches are ~ 6 years old
- As previously stated, we will be installing the new unpacking in the nearline code. We will test the code with LI. However, the problem really shows up for beam data.

Rock Muons/POT

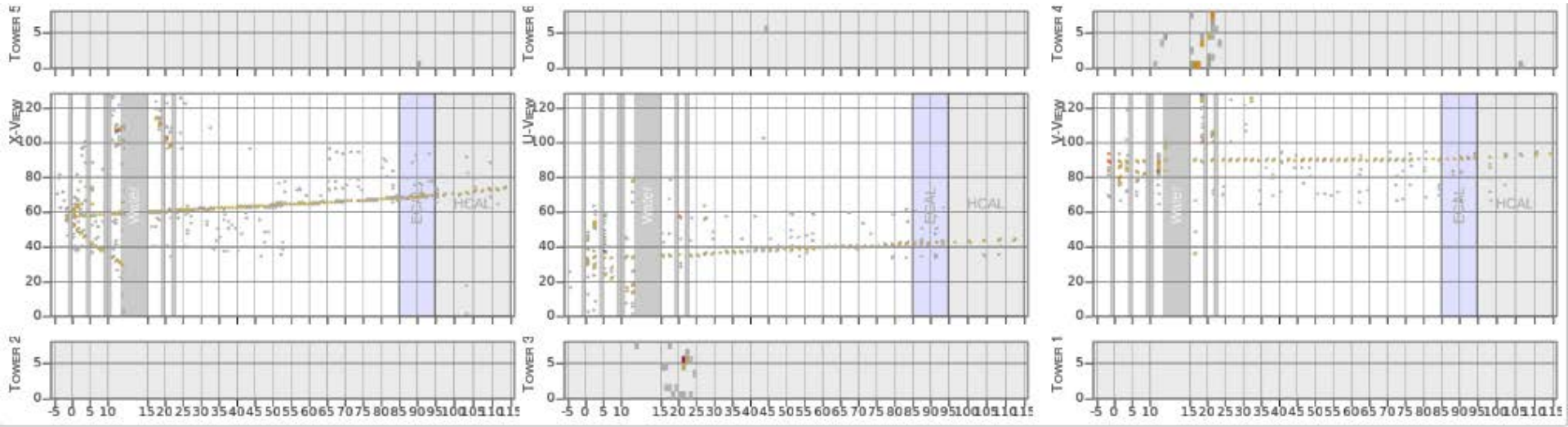


POT/Pulse



Rock Muons/POT

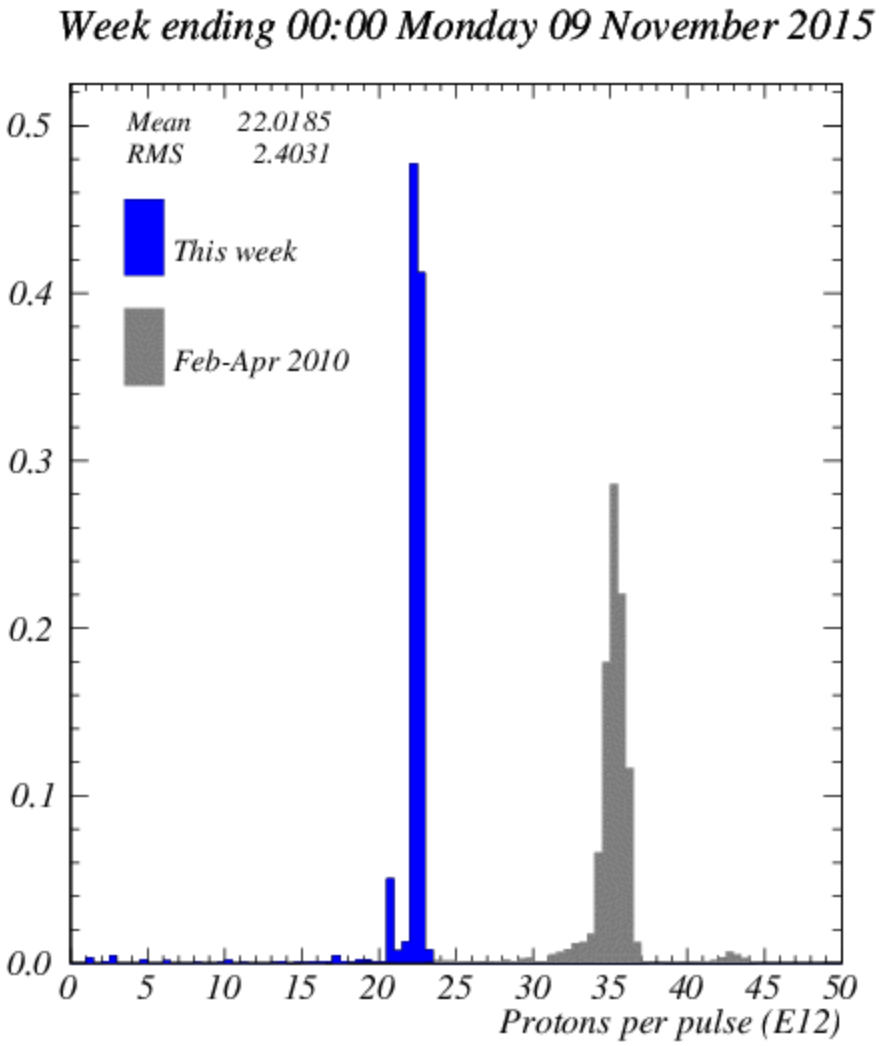
Event Display

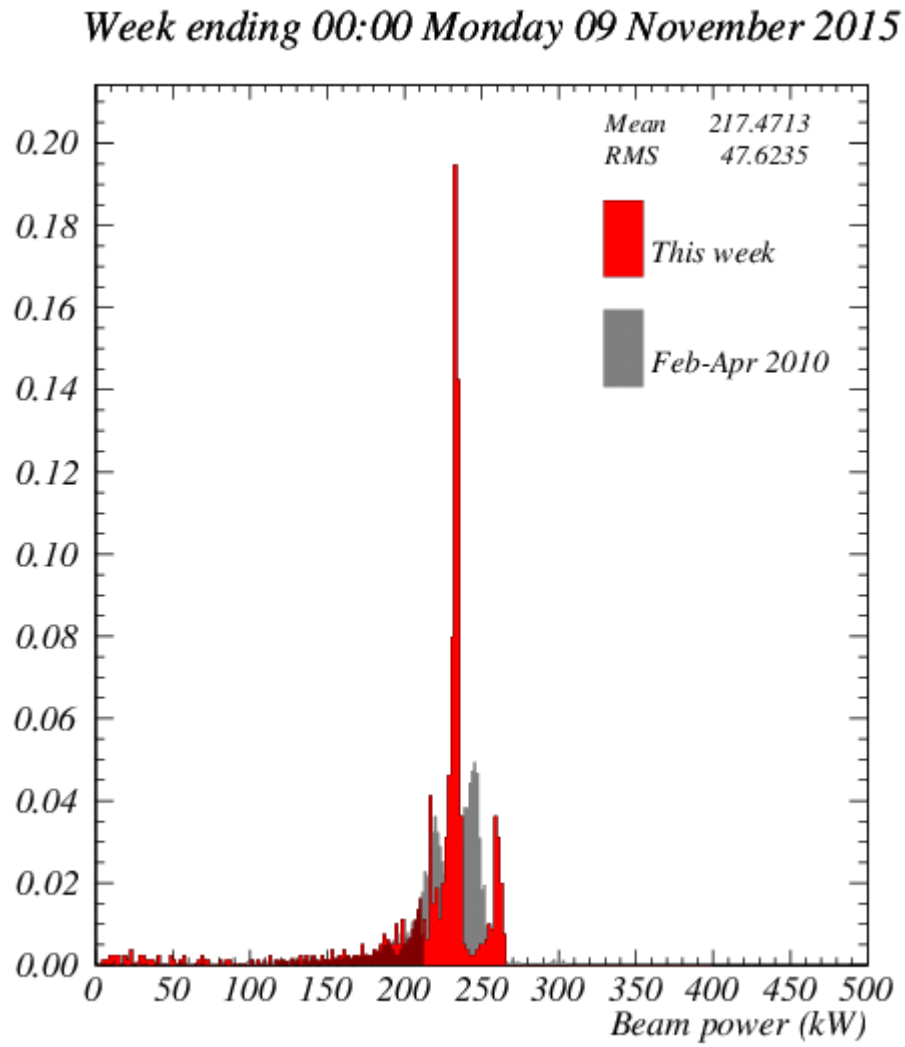


X View V View U View

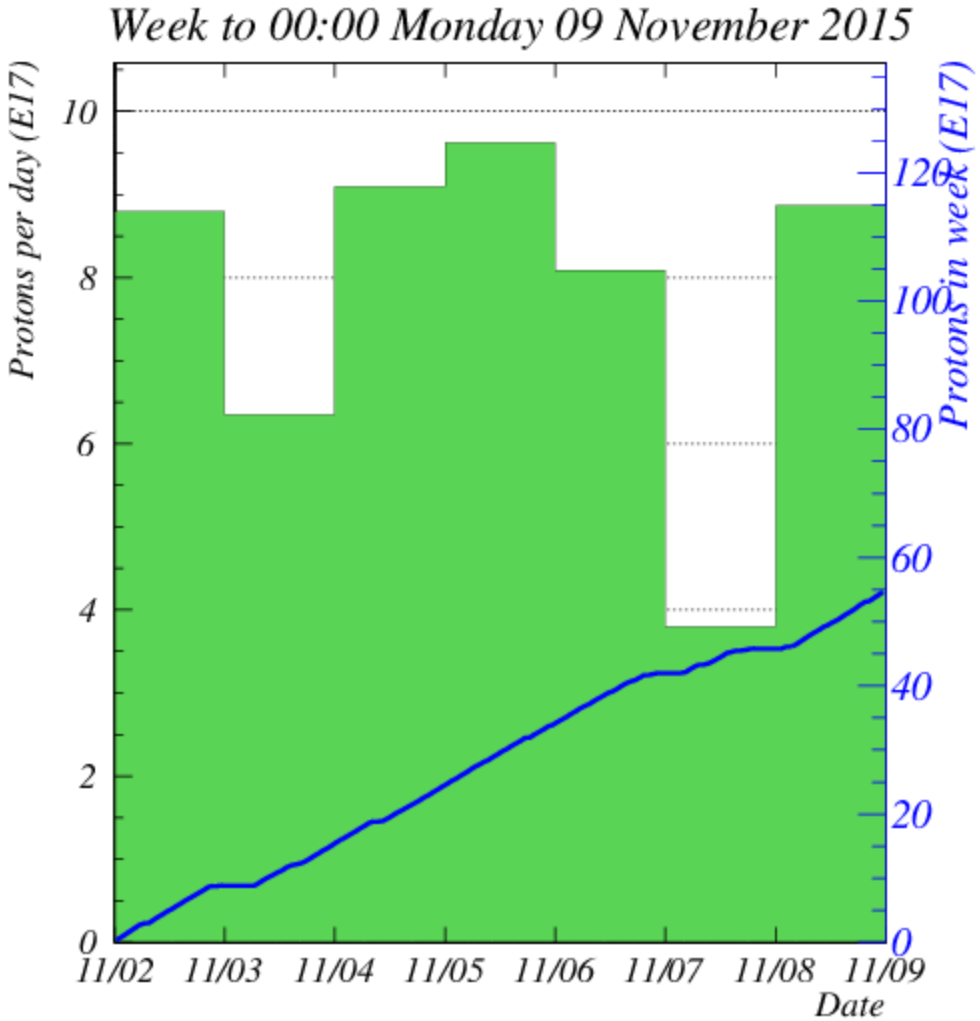
Nuclear Target CC Event

NuMI Beam Plots
Apr 20-26, 2015



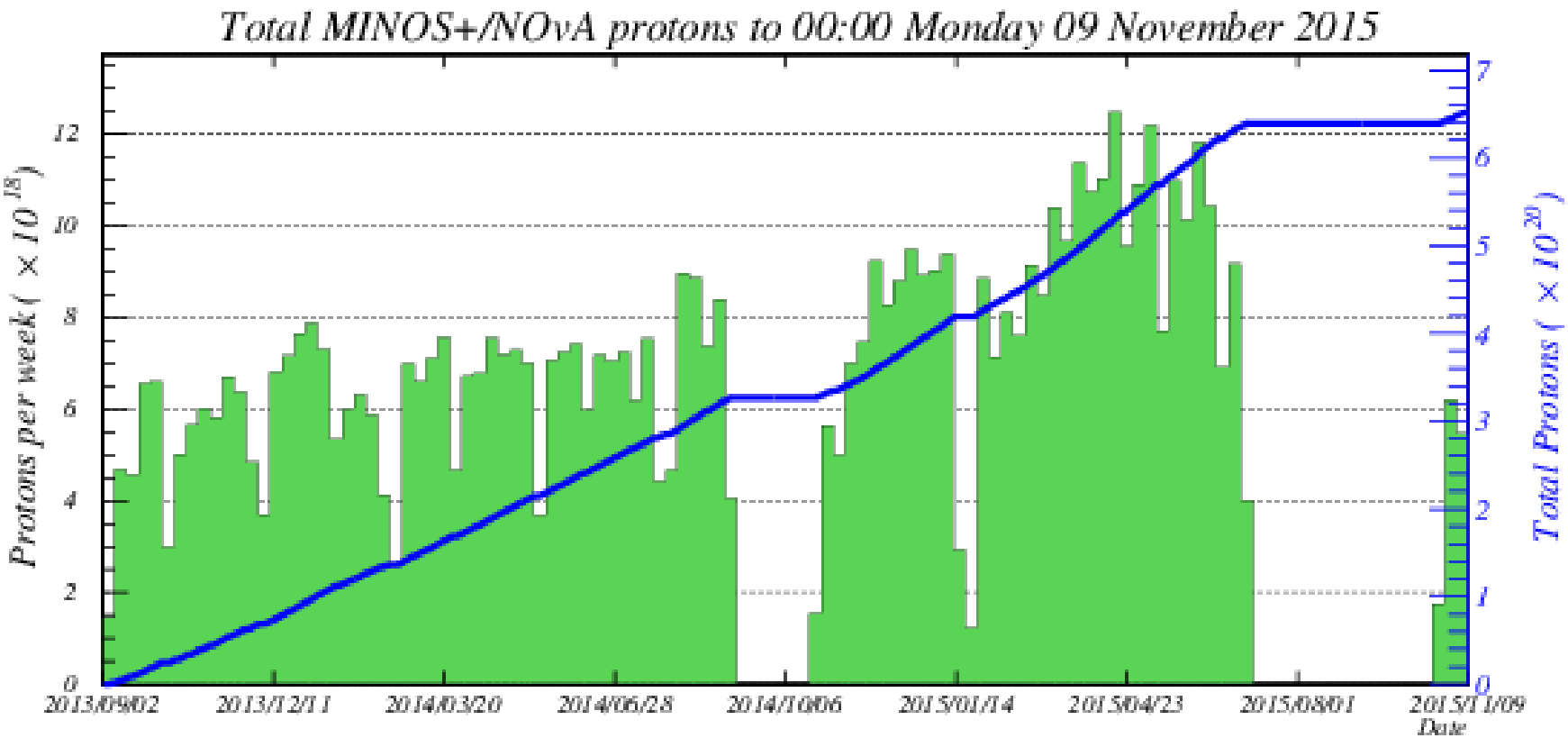


Protons for the Week



0.55×10^{19} POT
Nov 2-8, 2015

Protons for ME Run



65.19 $\times 10^{19}$ POT - Sep 6, 2013 – Nov 8, 2015