The MINERνA Operations Report
All Experimenters Meeting

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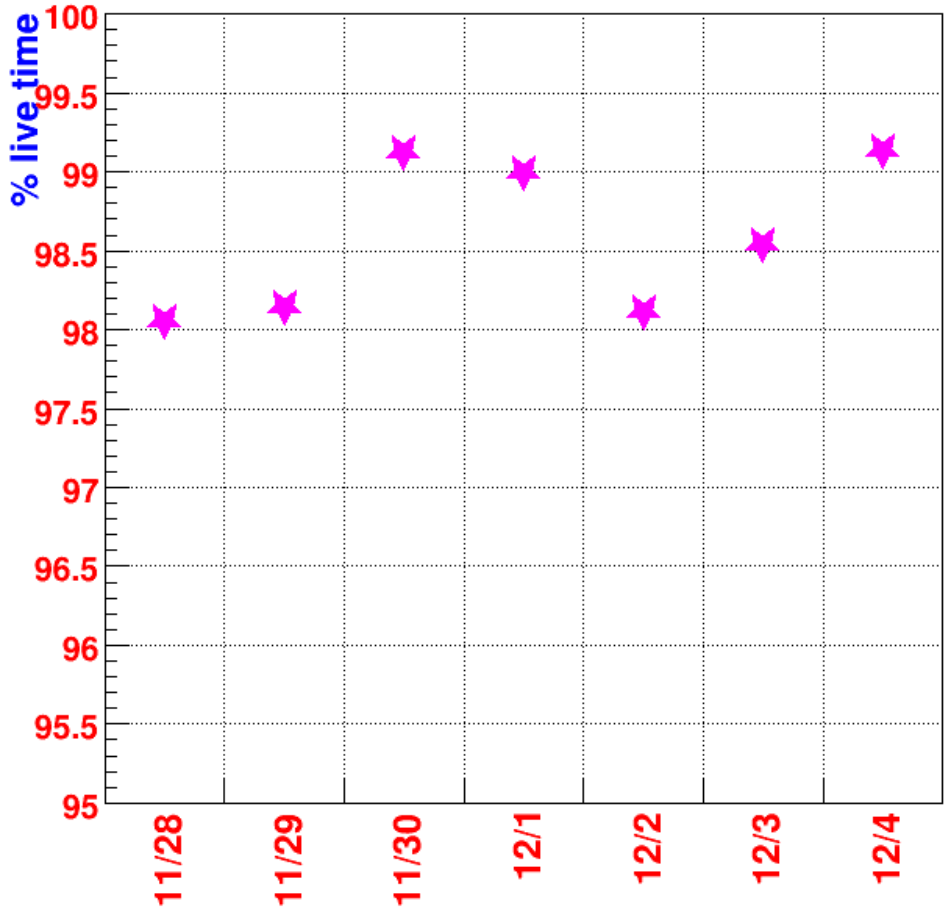
Dec 9, 2013

Taking Data

- We are taking data with very small downtimes
  - For some runs we take a LI trigger just after a beam trigger.
  - We are having instances where one or both of the 2 light injection (LI) boxes are not working. We are not sure what is going on. We continue to take beam data whether the LI box is working or not.
  - We are increasing the number of beam-LI runs to compensate for this

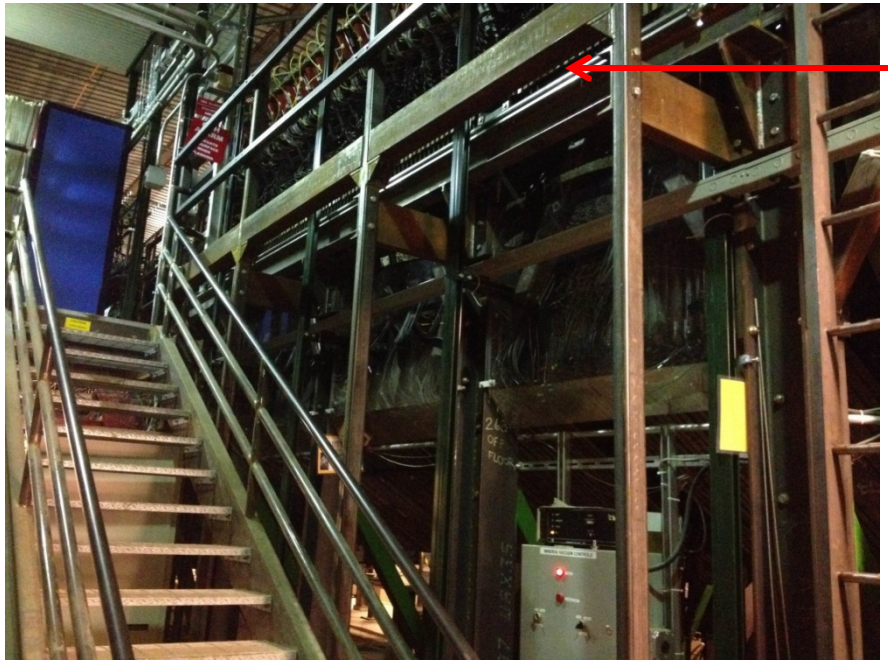
ν Data

From	To	POT	MINERvA Live time
28-Nov-2013	4-Dec-2013	5.89E+18	98.5%



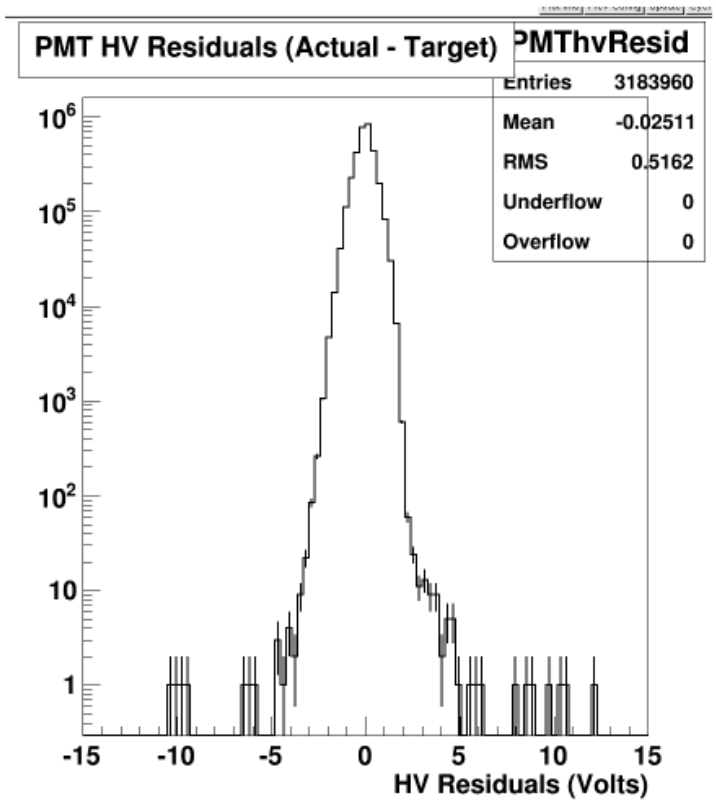
% live time Nov 28 –Dec 4

West Platform



- Work for the shutdown
  - The 3d flooring piece for the platform was tied down
  - The chain guard for a gate was installed
  - The 3d railing was installed
- The platform is ready for use
- Using the west platform we replaced the FEB which had high PEDs ave in ½ the low channels. (The PED ave > 2000 for this FEB, & nominal PED ~ 450.

PMT with HV varying problem



- PMT with has the "High Voltage Varying Problem".
  - A Cockcroft-Walton generator puts the HV on the tube
  - The HV varies around its set value. Not sure why, we speculate is there is a connection issue
- On Dec 2 we replaced the FEB, which didn't help, but sometimes it does
- On Dec 4 we replaced the PMT Box which fixed the problem

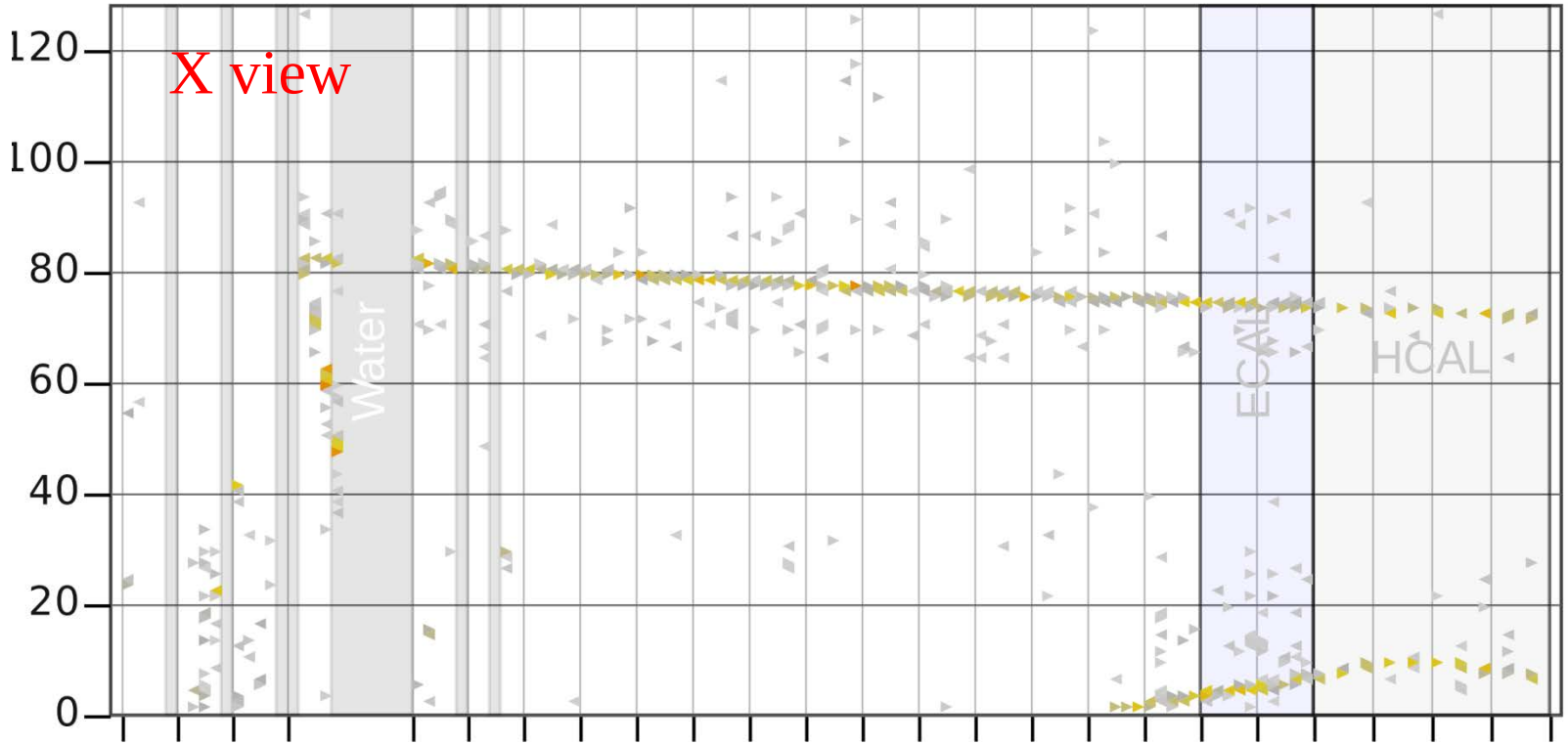
FEB Firmware Upgrade

- The FEBs can store 7 hits for a channel in a gate.
  - In fact what actually happens if one channel has a hit above threshold, it causes 32 channels (½ PMT) to store their ADC and TDC values. These 32 channels can store their values in a beam gate 7 times.
- This limit will need to increase as the beam intensity increases.
  - A new FEB firmware is being created which increases the number of times these 32 channels can store their data from 7 times to 23 times.
  - The FEB firmware is written
  - We have a test setup on the 14 floor which can generate as many light pulses as are needed to test the new firmware.
  - The firmware has been tested and some issues are being corrected.
  - Worked on by Cristian Gingu & Paul Rubinov (PPD EED).
- It will be ready after the 1st of the year

CROC-E Firmware To Check CRC word

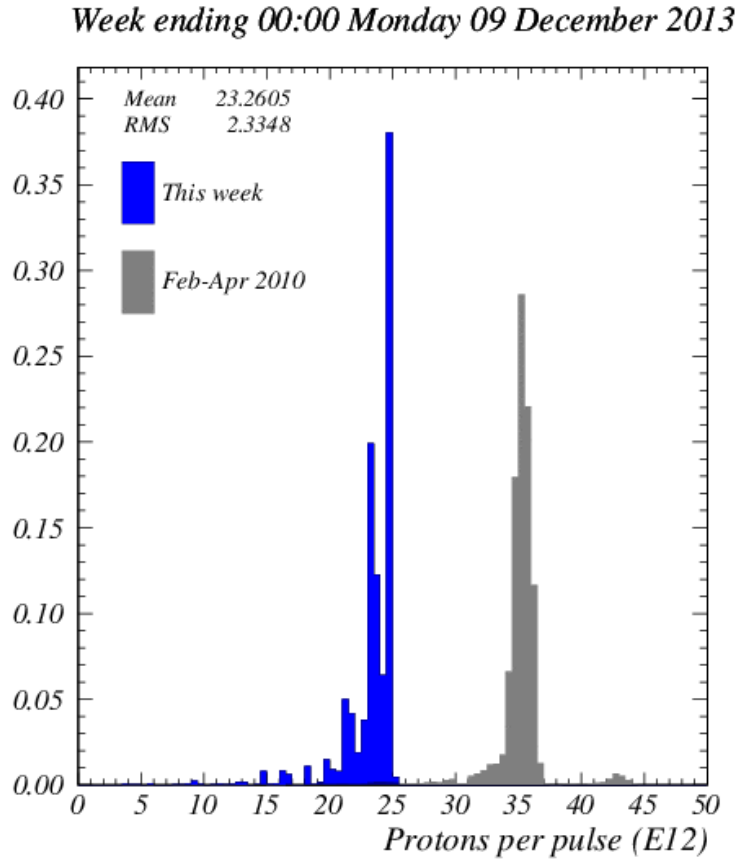
- CROC-E firmware upgrade which checks the CRC word
  - Goal: The CRC word (cyclic redundancy check) for all the frames will be passed to the offline to check that there is no problem with the data.
- The firmware has been written by Cristian Gingu.
- We have tested this firmware on 1 CROC-E in the 14th floor test stand, and the firmware seems to work.
- We will be testing this on a larger hardware setup on the 14th floor.
- Firmware should be ready after the 1st of the year
  - The CROC-Es need to be brought to the 14th floor to implement this change.

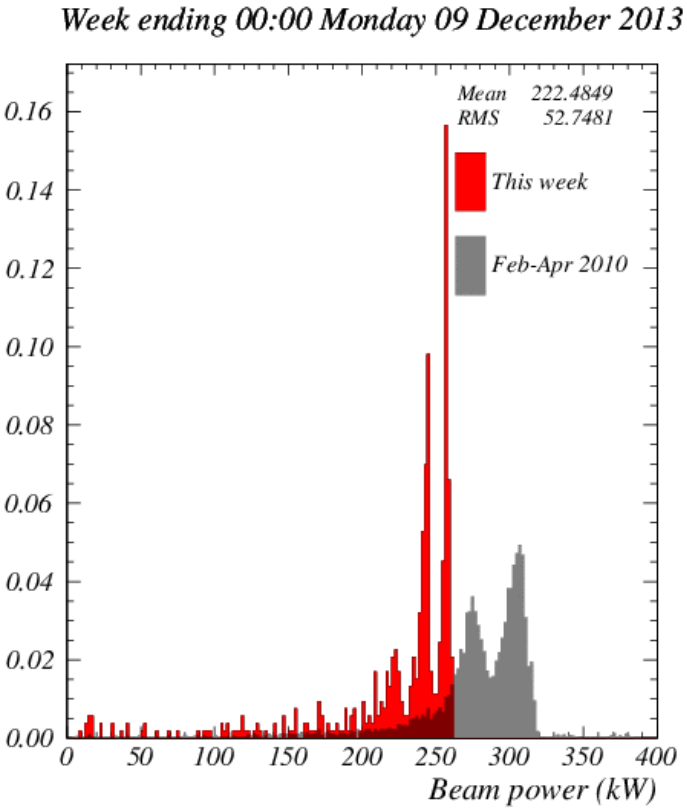
Event Display



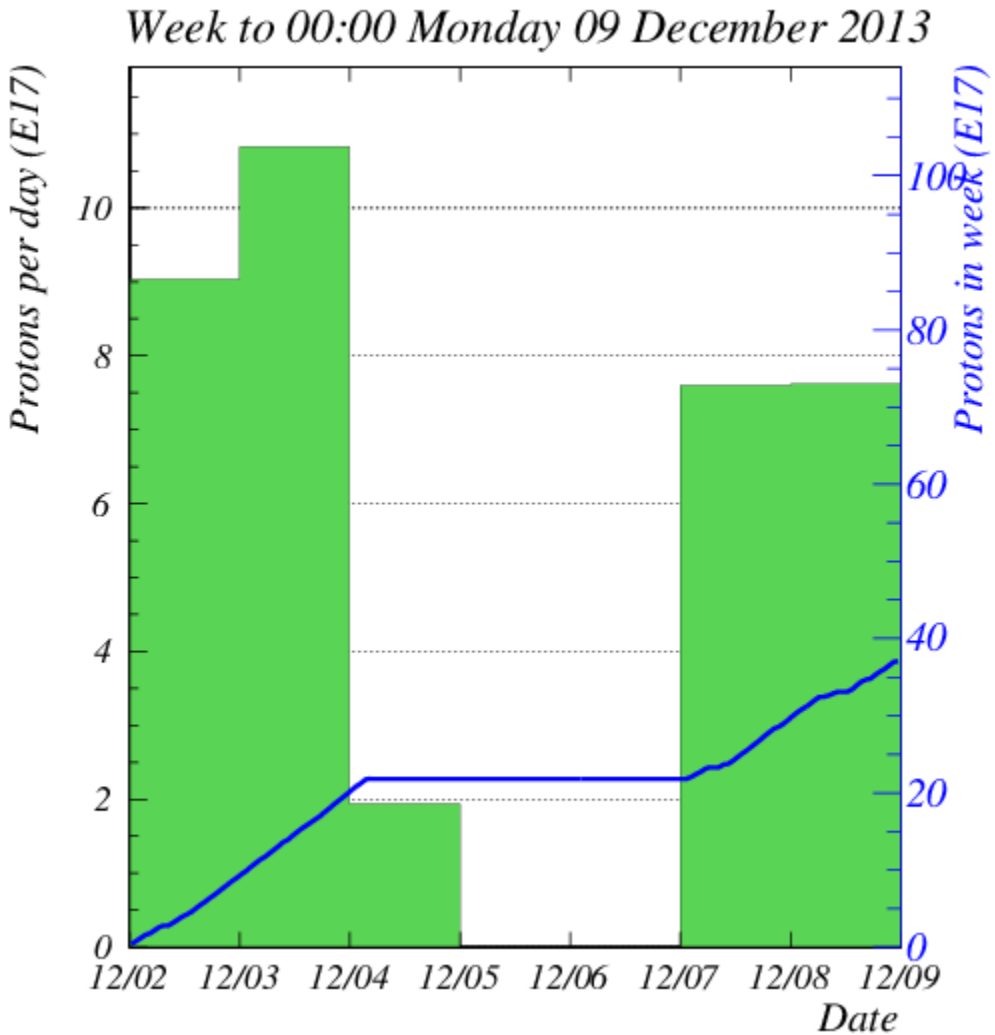
- Nuclear target quasi-elastic event

NuMI Beam Plots



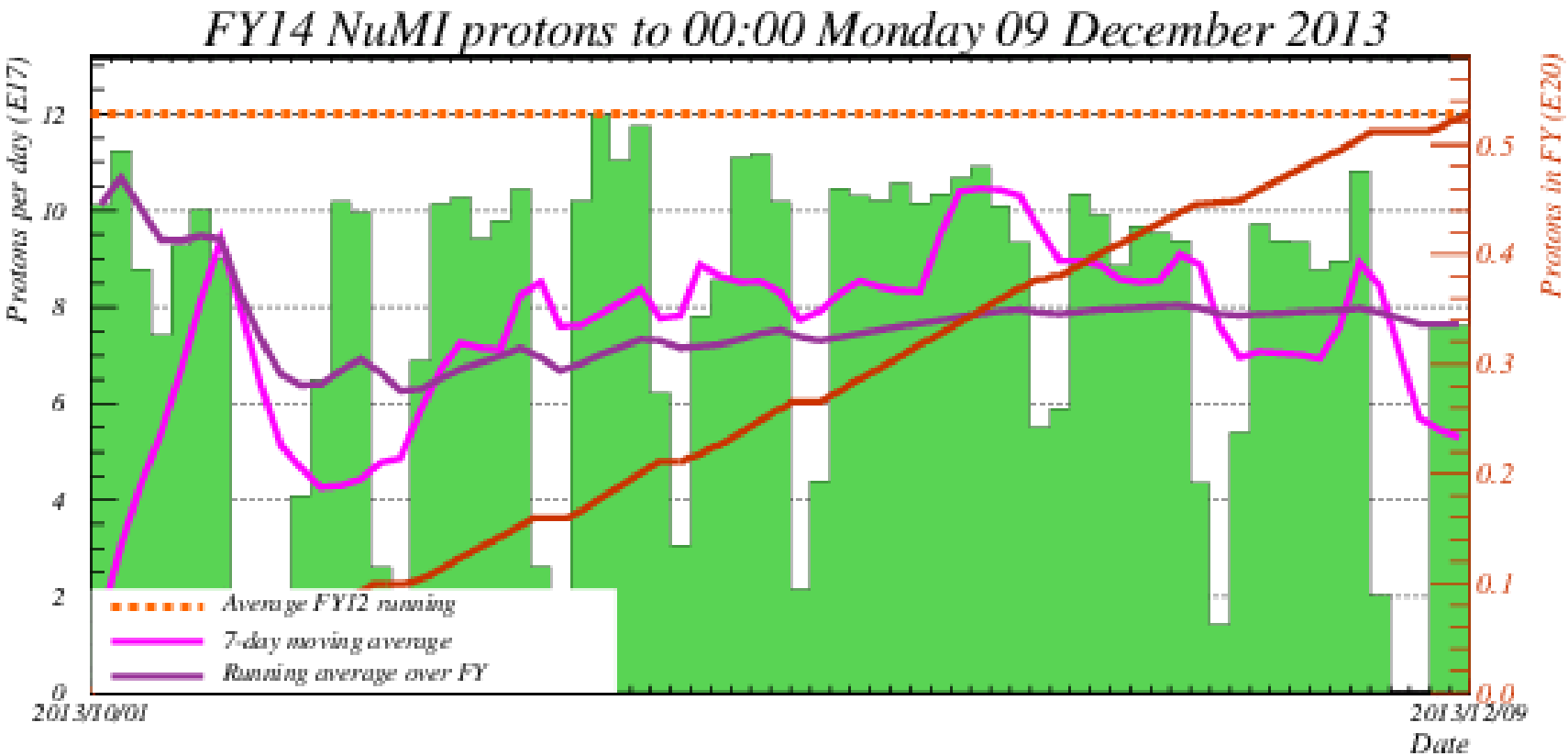


Protons for the Week



0.370×10^{19} POT
Dec 2-8

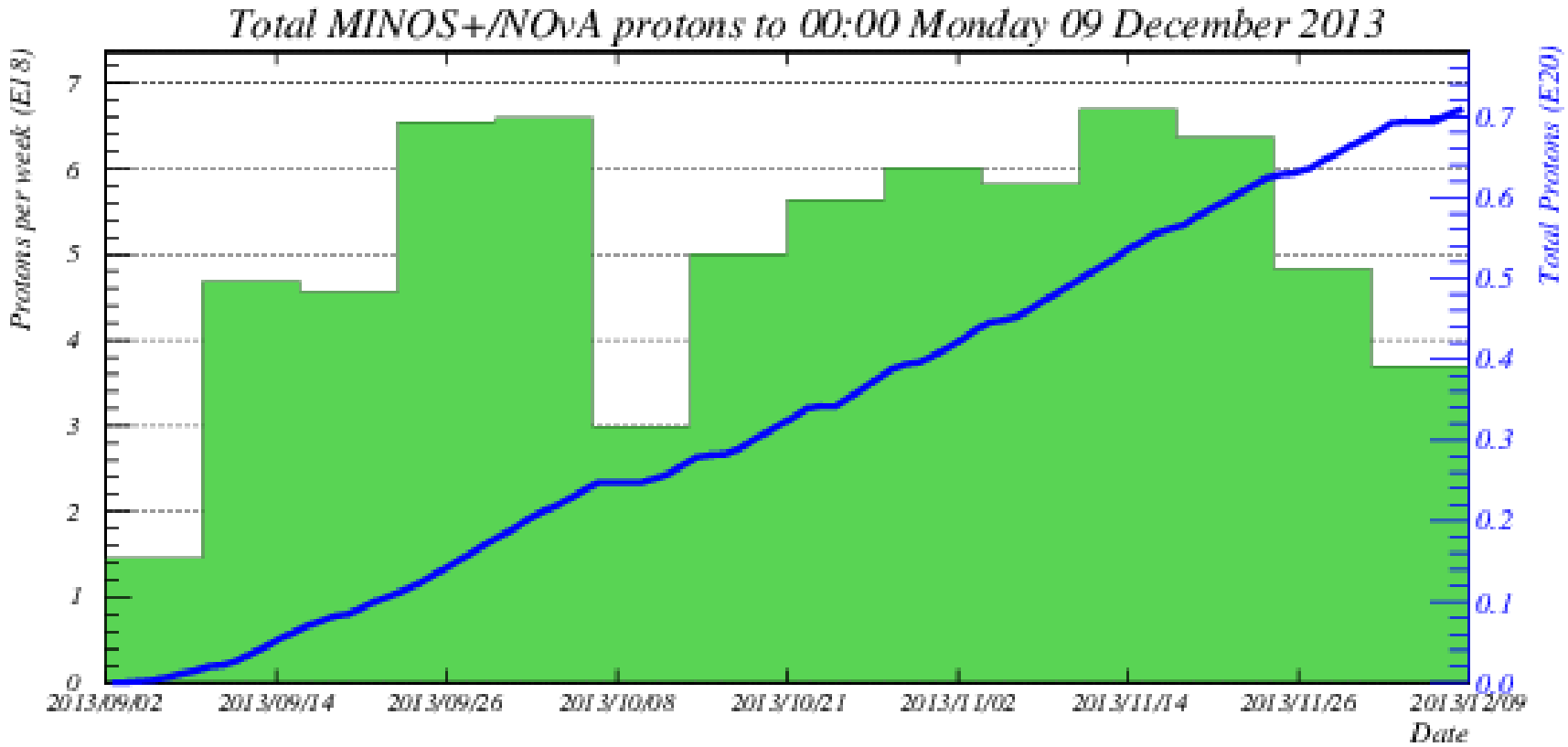
FY2014 Protons



5.27×10^{19} POT

Oct 1- Dec 8

Protons for ME Run



7.05×10^{19} POT

Sep 6 2013 at 15:00 – Dec 8