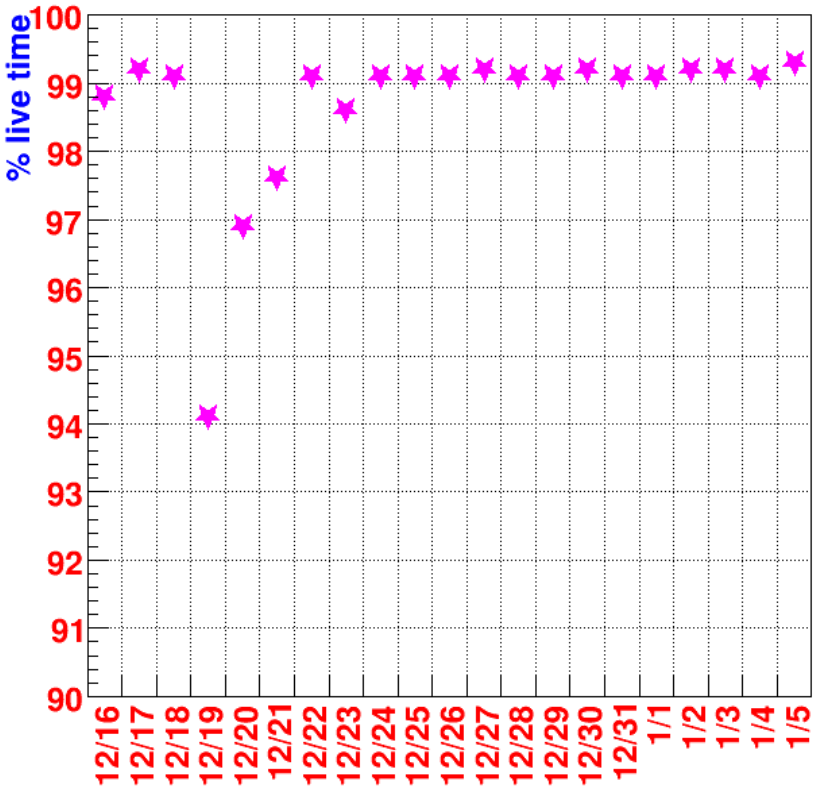
The MINERνA Operations Report
All Experimenters Meeting

Howard Budd, University of Rochester

Jan 9 2012

ν Data

- 13.50×10^{19} POT with NT-07
- 12.19×10^{19} POT for ν, Oct 6 – Jan 8, LE10 with NT-07
- 2.80×10^{19} POT for ν, Dec 18 –Jan 8
  - 0.93×10^{19} POT for ν, Dec 18-25
  - 0.99×10^{19} POT for ν, Dec 26-Jan1
  - 0.88×10^{19} POT for ν, Jan 2-8
- Total Live time Dec 16 – Jan 5, MINOS*MINERvA = 86.6%
  - Describe 94% Live time on next page



% live time Dec 16 – Jan 5

		POT	MINOS Live time	MINERvA Live time	Live time
16-Dec-11	22-Dec-11	8.62E+18	71.0%	97.8%	69.4%
23-Dec-11	29-Dec-11	9.42E+18	96.9%	99.1%	96.0%
30-Dec-11	05-Jan-12	9.49E+18	94.1%	99.2%	93.3%
16-Dec-11	05-Jan-12	2.75E+19	87.8%	98.7%	86.8%

Hardware Fixes

- Dec 19 MINOS DAQ was not up in the morning due to the high temp in the MINOS Hall causing power supplies to go turn off, to be described in the MINOS AEM talk
- MINERvA took advantage of this down time by replacing 5 FEBs, (Front End Boards), origin of 94% livetime.
  - 4 FEBs in a row which were soaked in the Easter Rain Storm were periodically resetting themselves HV = 0. They were replaced.
    - Problem has not reoccurred.
    - The FEBs didn't look different from their neighbors,
  - Periodic problem with either a PMT or FEB where the HV varies by roughly 0-10 volts away from set voltage. We start by replacing the FEB
    - We replaced 1 FEB which had this problem

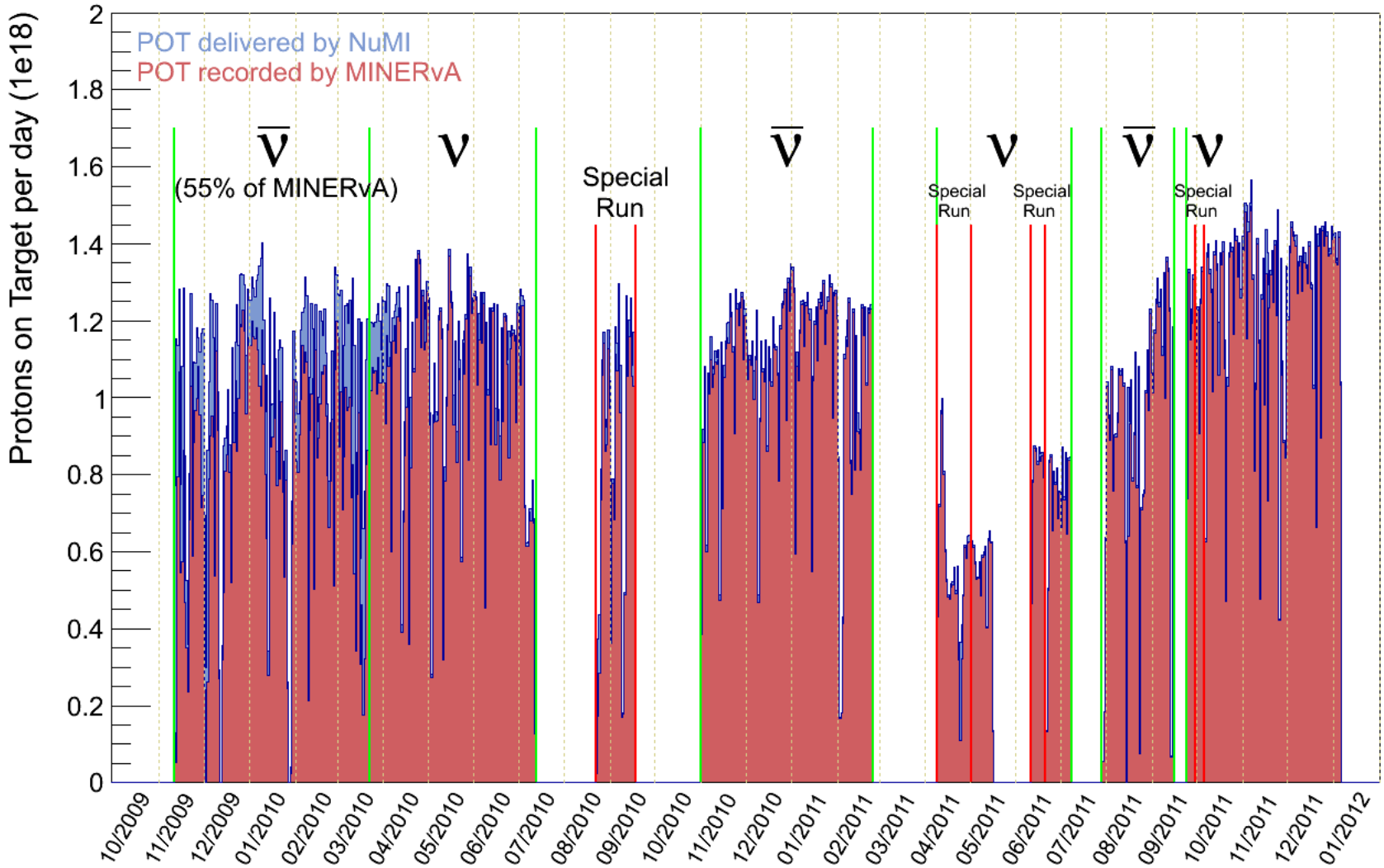
Look Back at Easter Rain Storm

- Drainage pipe clogged and water came down from here on the FEB/PMTs
- Took almost 2 days to recover from this water leak.

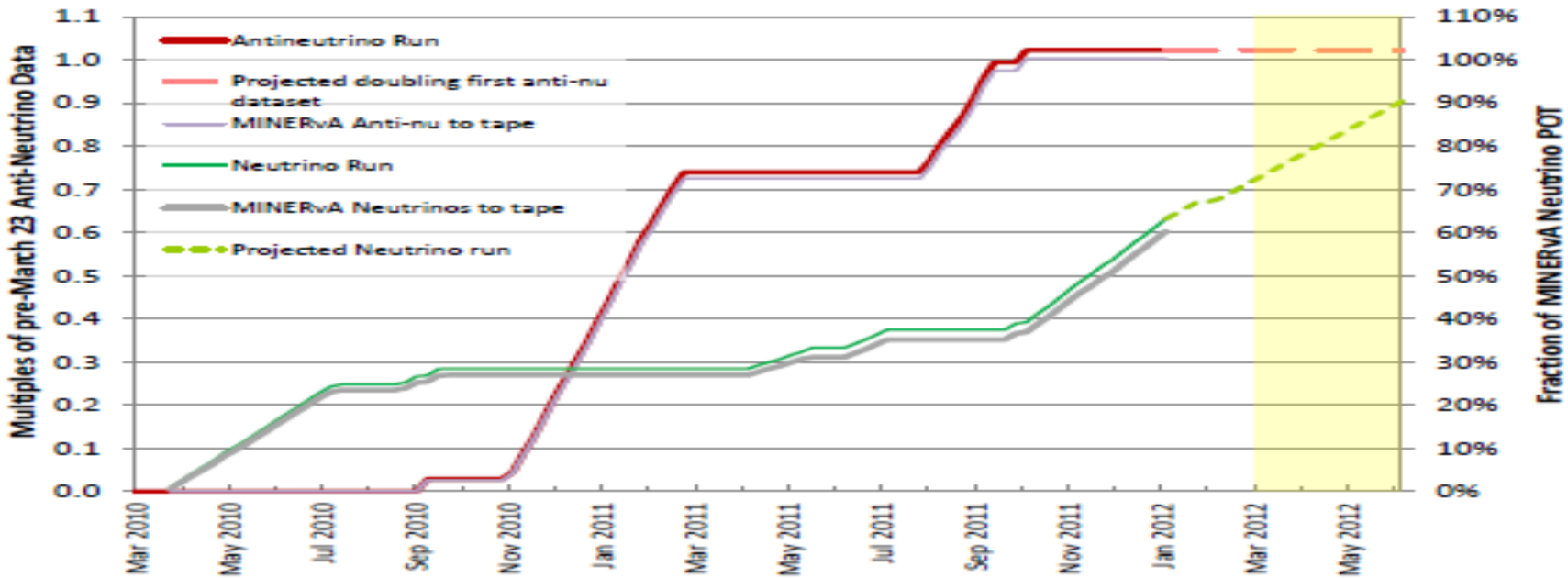
Hardware Fixes

- Dec 20 replaced 2 boards with the HV varying problem
- Jan 5 replaced 1 board with HV varying problem
- Jan 5, we worked on dead channels which were created by the installation of the water target. We found what we though was a bad optical cable, but replacing this cable didn’t seem to help.
- We will continue to use the accelerator down times to work on this problem and other problems that occur.

MINERνA POT/Day
Nov 2009 - Present

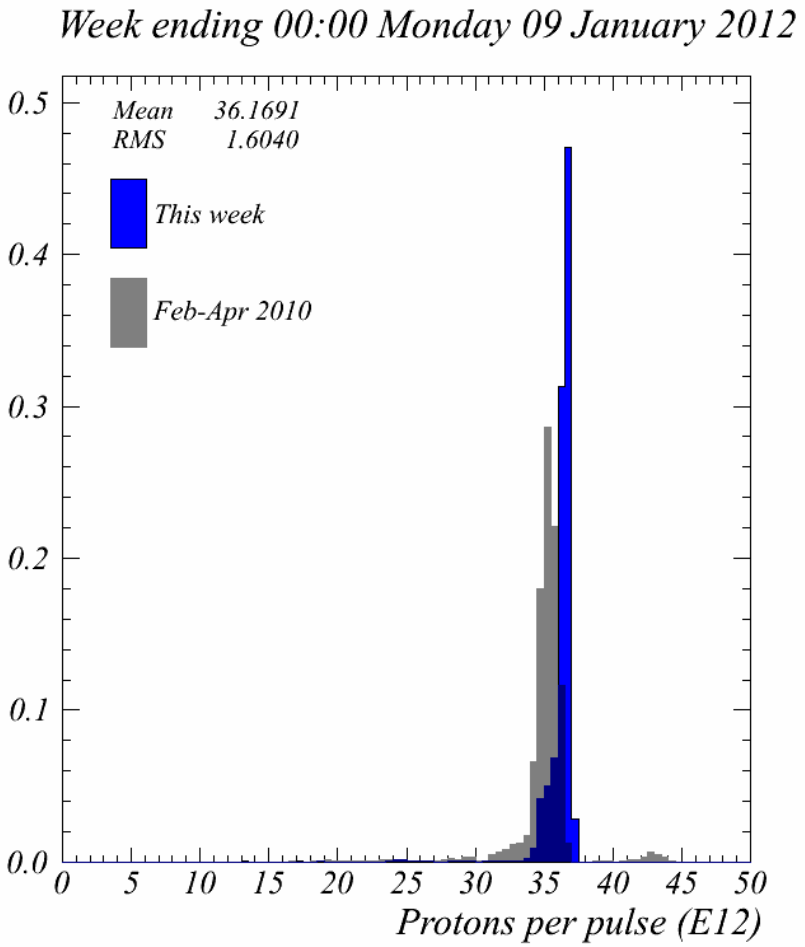


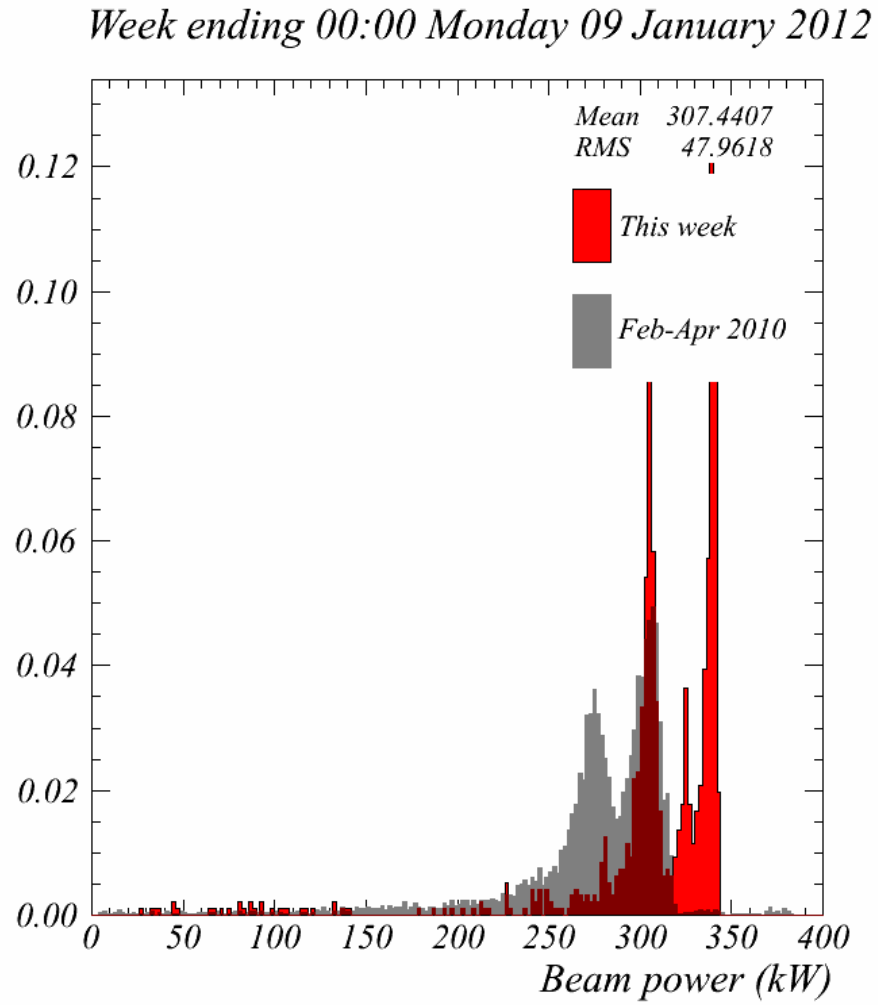
Accumulated POT to Jan 5



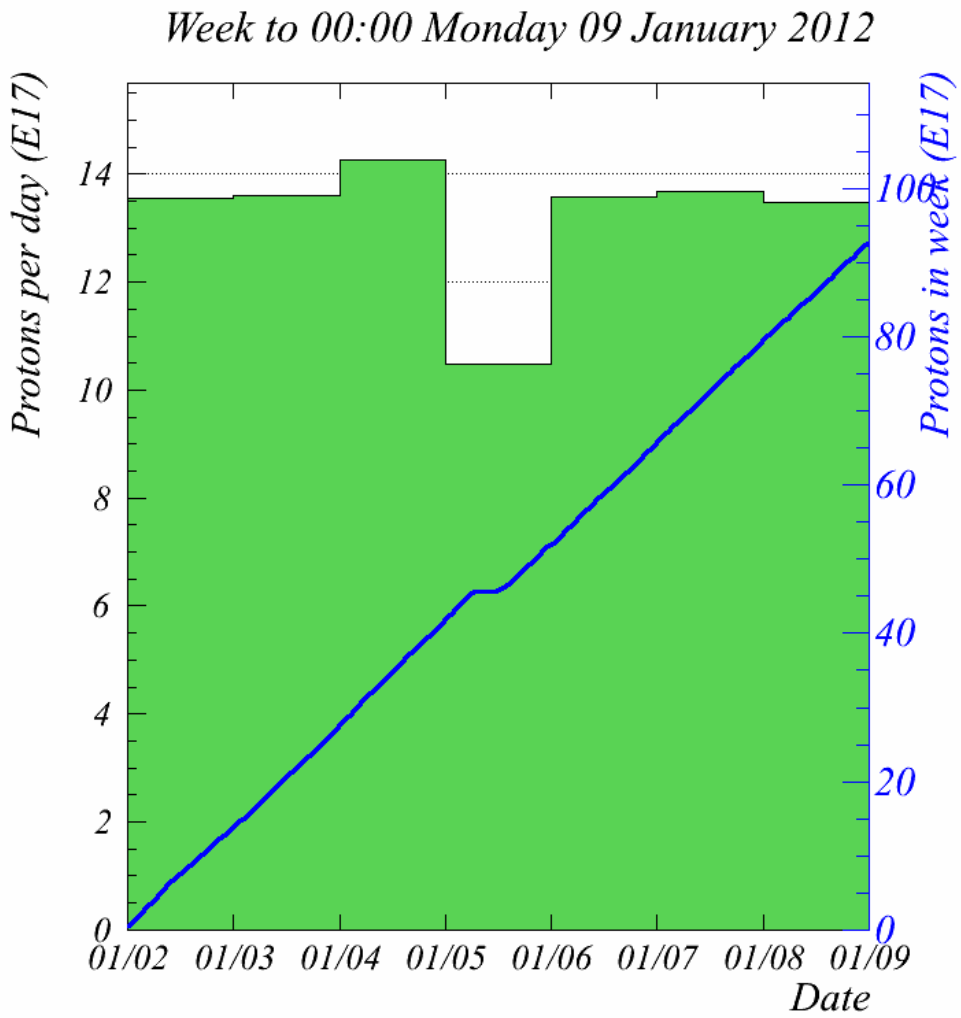
- Anti-ν run, full scale corresponds to 1.76×10^{20} POT
  - # POT for collected for anti-ν before Mar 23 10, official start of MINERνA ν run
- NT02 running gives enough anti–ν data for doubling of the 1st anti–ν data set.
- Minerva run , full scale corresponds to 4.9×10^{20} POT
  - # for which MINERvA project & experiment were reviewed & the detector built.
- Projected assumes 0.92×10^{18} POT/day
  - # POTs – average over the uptime during the past 1.5 years
  - Actual run plan not yet determined, this is one possible scenario

NuMI Beam Plots

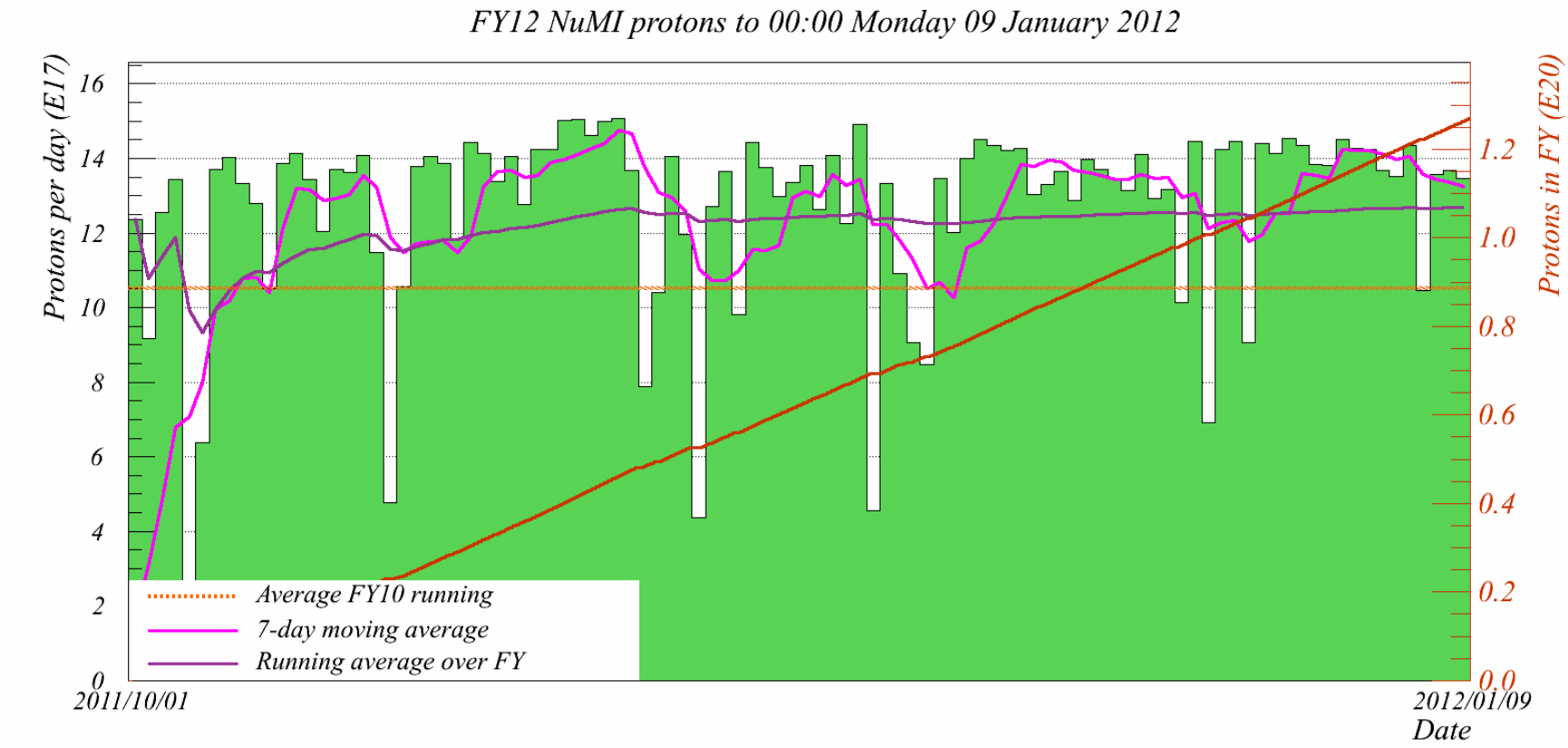
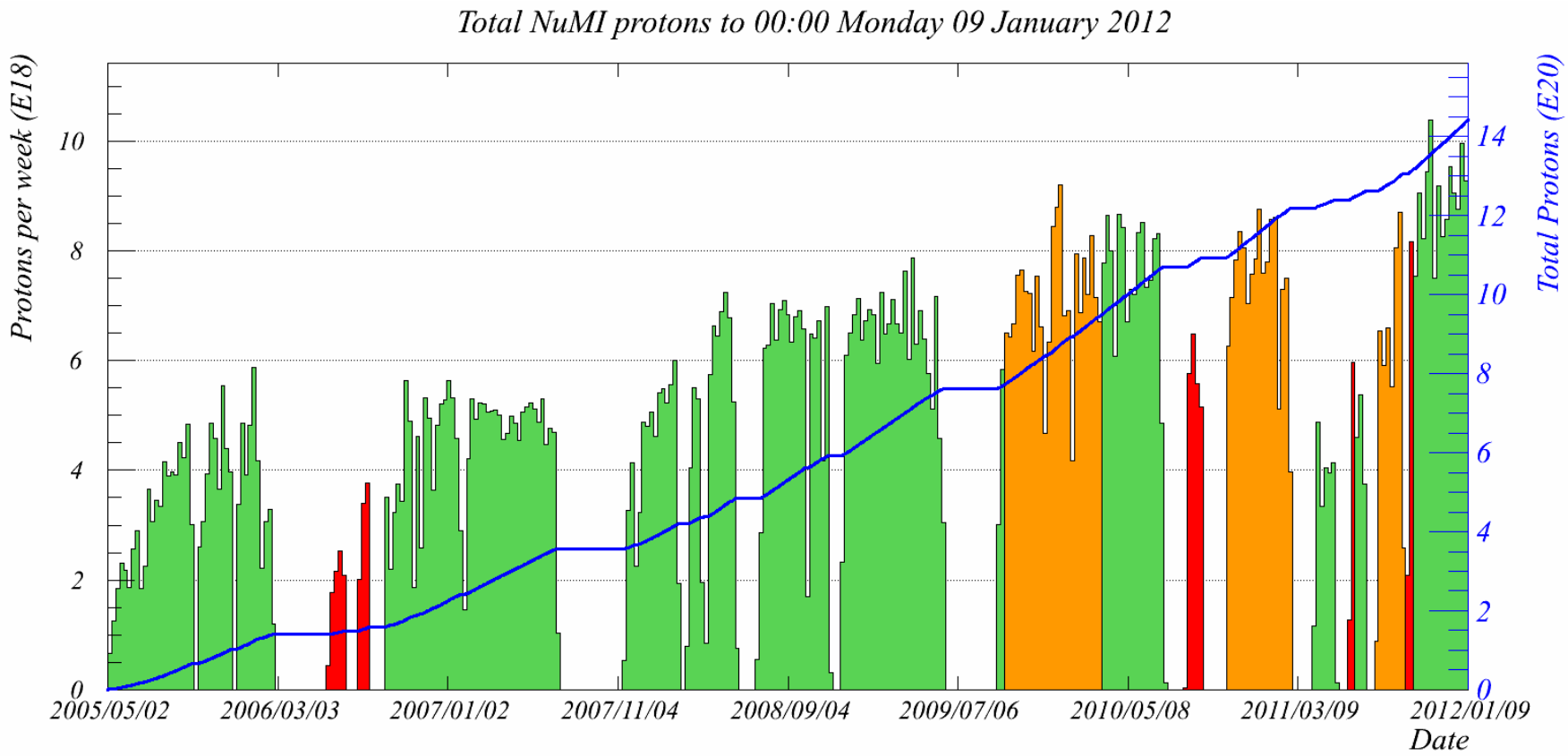




Protons for the Week



FY2012 Protons



NuMI Protons over History