

# The MINERvA Operations Report

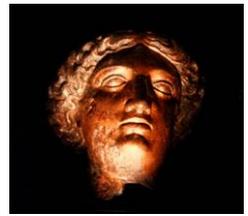
## All Experimenters Meeting

Howard Budd, University of Rochester  
Jan 9 2012





# Chiller is Working

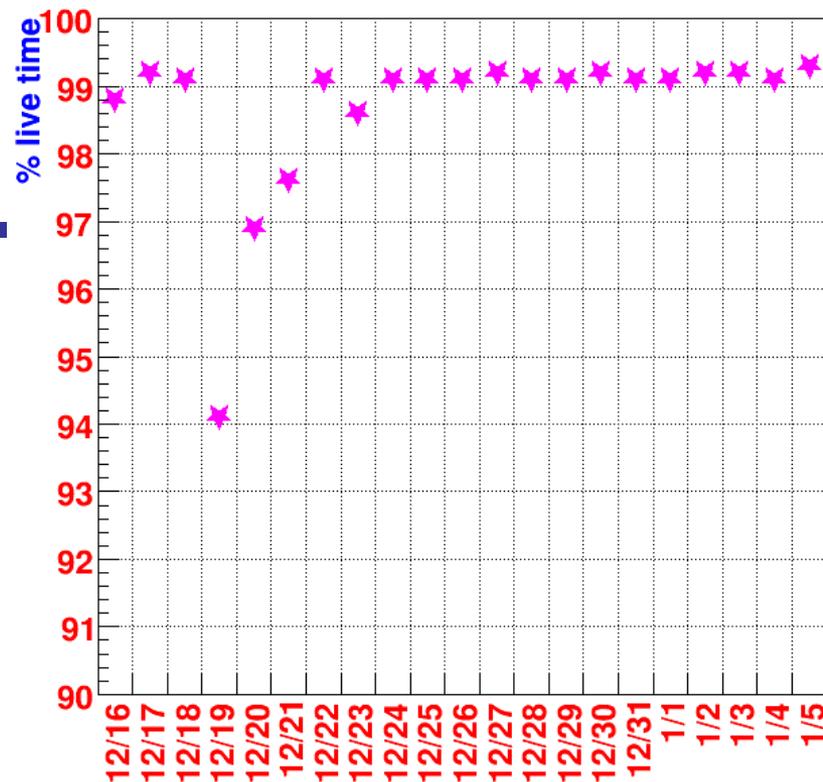


- The Chiller is up and cooling the LCD water
  - MINOS will give the temp changes
- We would like to thank Mike Andrews (AD) & Lee Hammond of FESS for designing this (Lee) and seeing the work through to the very end.



# $\nu$ Data

- $13.50 \times 10^{19}$  POT with NT-07
- $12.19 \times 10^{19}$  POT for  $\nu$ , Oct 6 – Jan 8, LE10 with NT-07
- $2.80 \times 10^{19}$  POT for  $\nu$ , Dec 18 – Jan 8
  - $0.93 \times 10^{19}$  POT for  $\nu$ , Dec 18-25
  - $0.99 \times 10^{19}$  POT for  $\nu$ , Dec 26-Jan 1
  - $0.88 \times 10^{19}$  POT for  $\nu$ , Jan 2-8
- Total Live time Dec 16 – Jan 5, MINOS\*MINERvA = 86.6%
  - Describe 94% Live time on next page

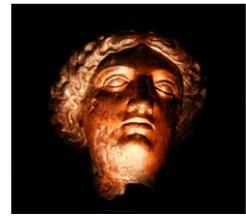


% live time Dec 16 – Jan 5

		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%
<b>16-Dec-11</b>	<b>05-Jan-12</b>	<b>2.75E+19</b>	<b>87.8%</b>	<b>98.7%</b>	<b>86.8%</b>



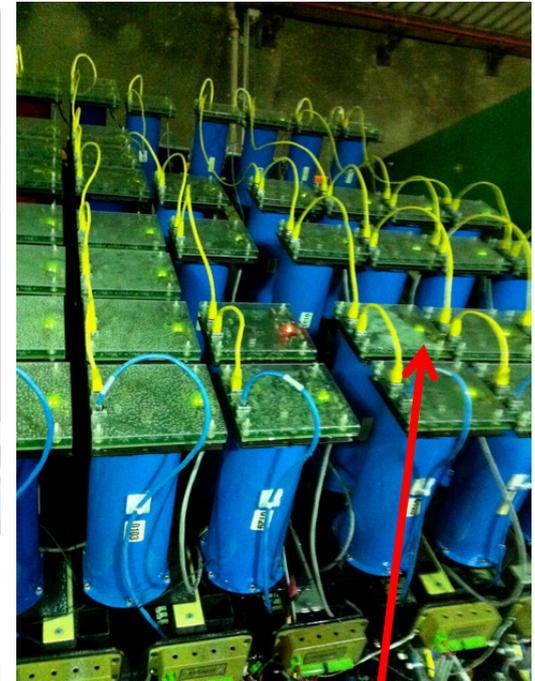
# Hardware Fixes



- 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.



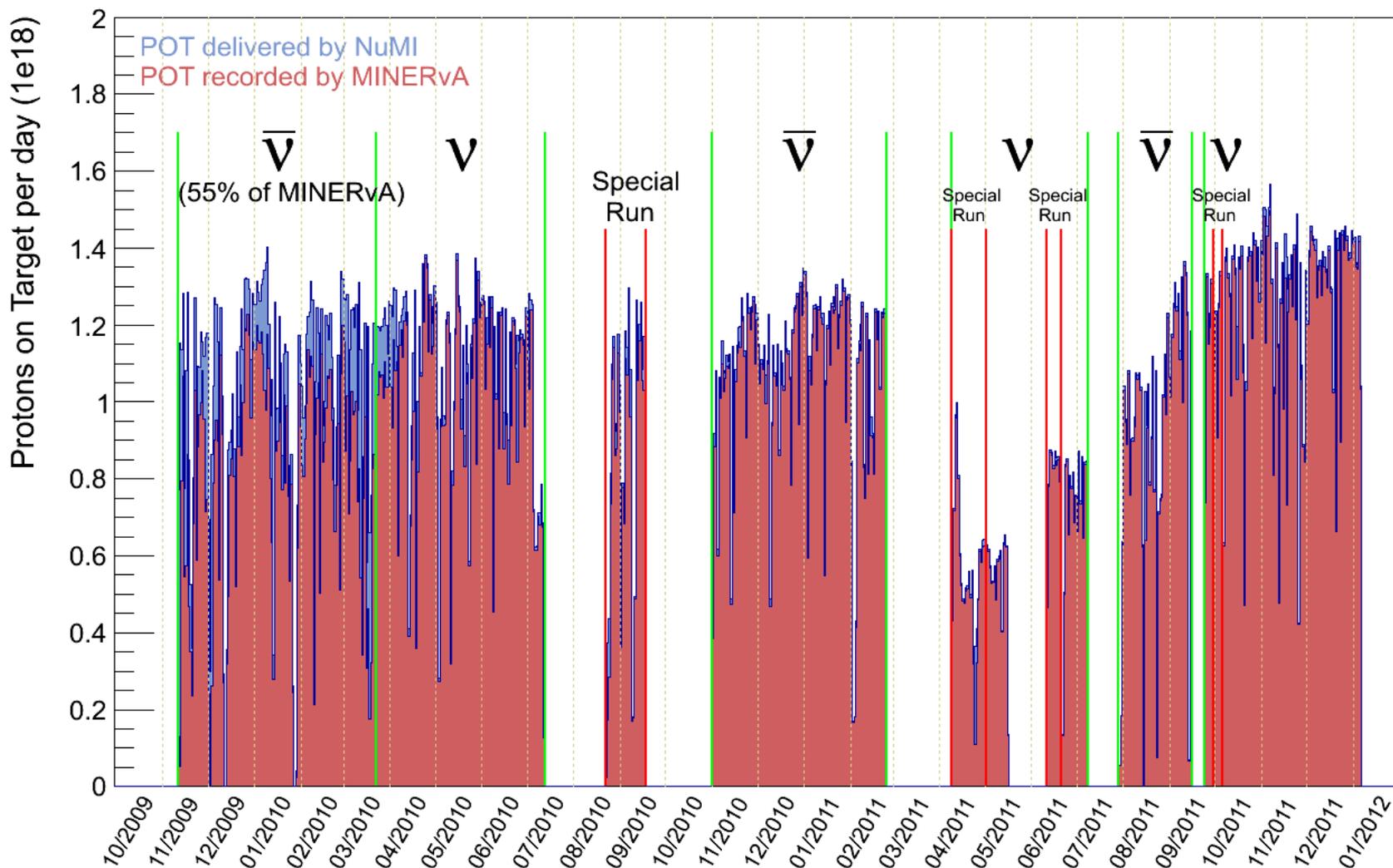
# Hardware Fixes



- Dec 20 replaced 2 boards with the HV varying problem
- Jan 5 replaced 1 board with HV varying problem
- Recently, this HV varying has been occurring more often and we are hoping the cooler temperatures from the chiller we reduce this problem
- Jan 5, we worked on dead channels which were created by the installation of the water target. We found what we thought 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.

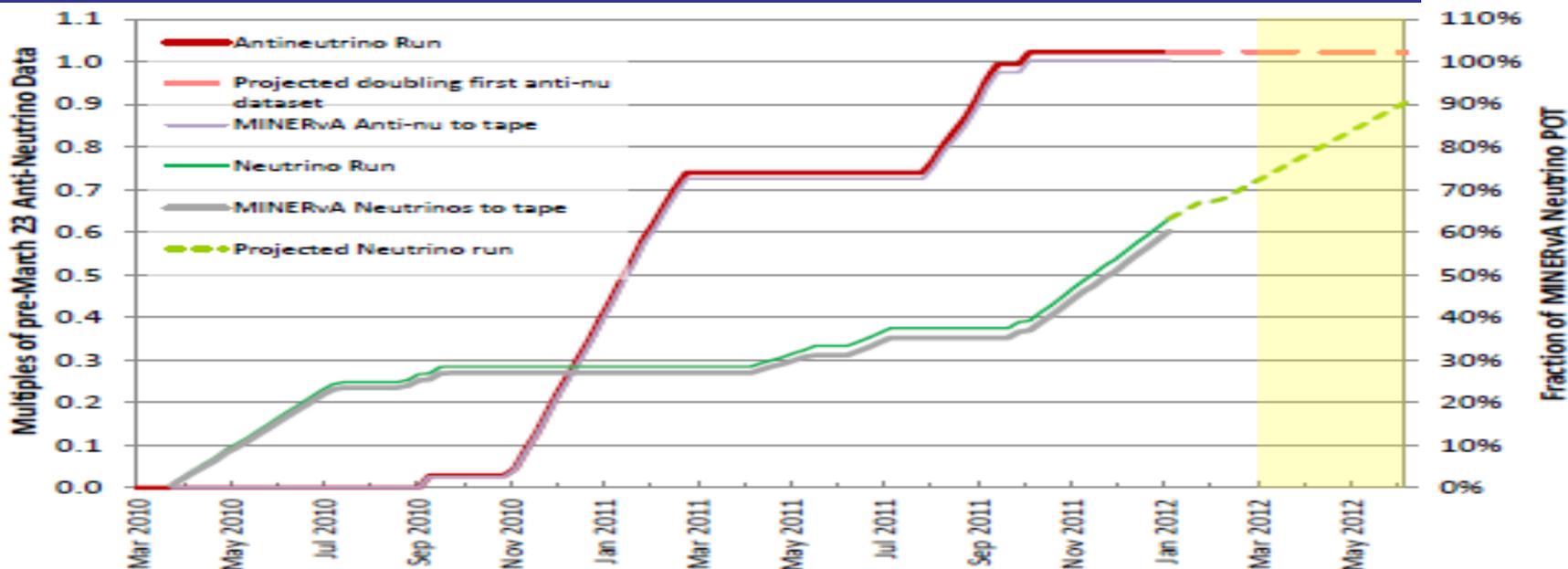


# MINERvA POT/Day Nov 2009 - Present





# Accumulated POT to Jan 5



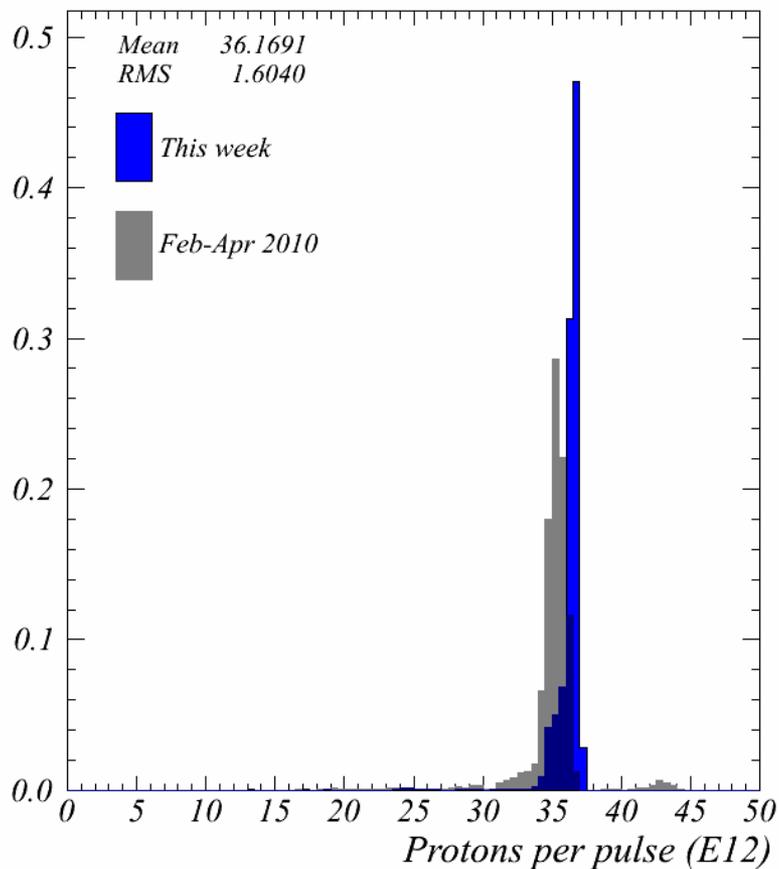
- Anti- $\nu$  run, full scale corresponds to  $1.76 \times 10^{20}$  POT
  - # POT for collected for anti- $\nu$  before Mar 23 10, official start of MINERvA  $\nu$  run
- NT02 running gives enough anti- $\nu$  data for doubling of the 1<sup>st</sup> anti- $\nu$  data set.
- Minerva run, full scale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



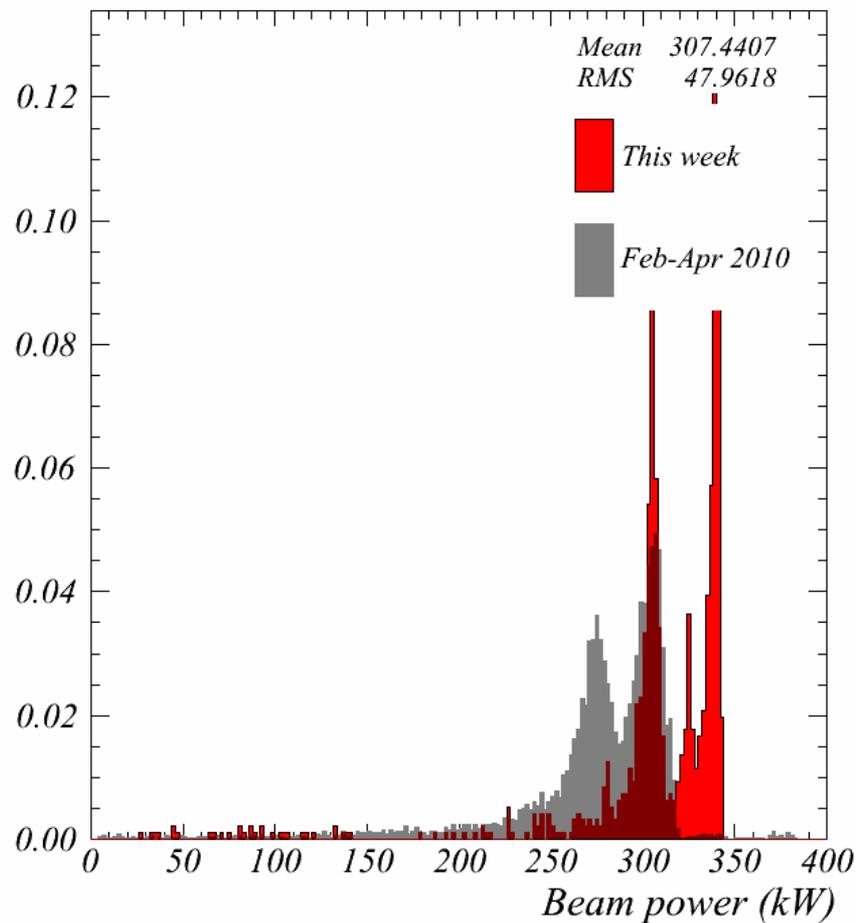
# NuMI Beam Plots



Week ending 00:00 Monday 09 January 2012

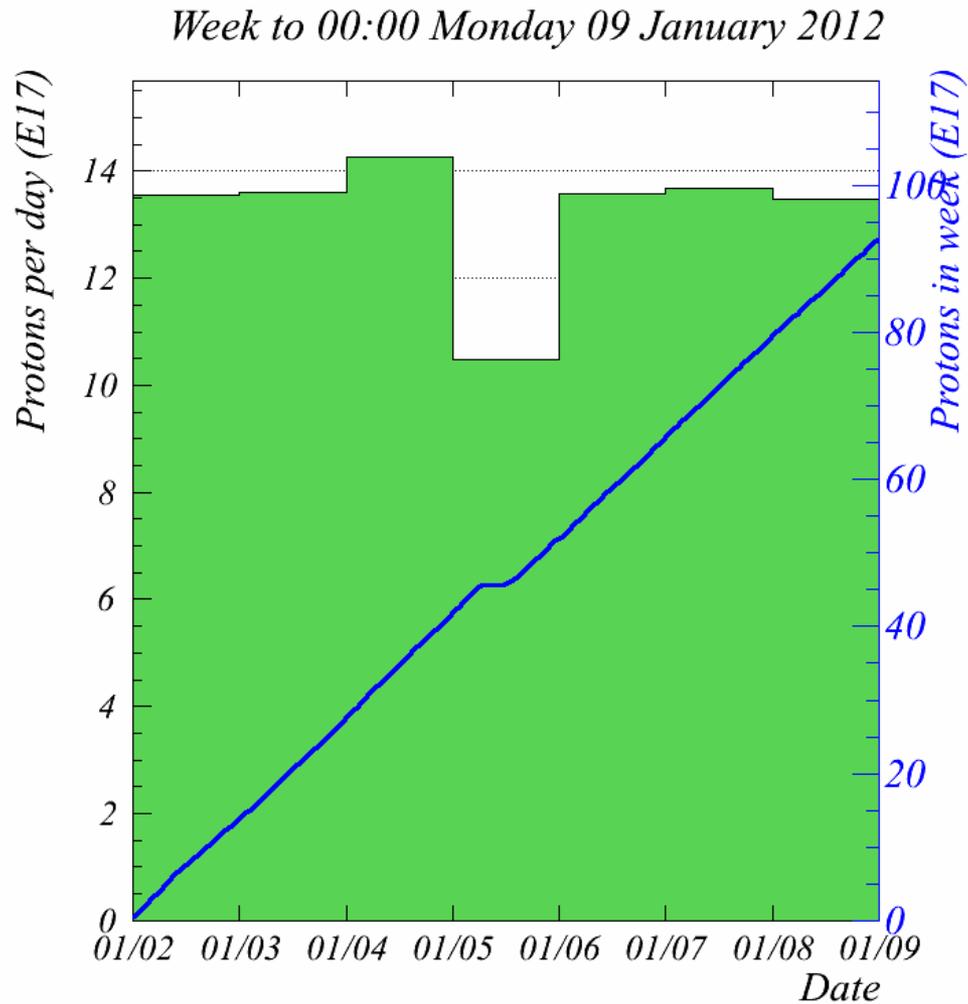


Week ending 00:00 Monday 09 January 2012



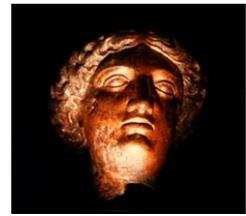


# Protons for the Week

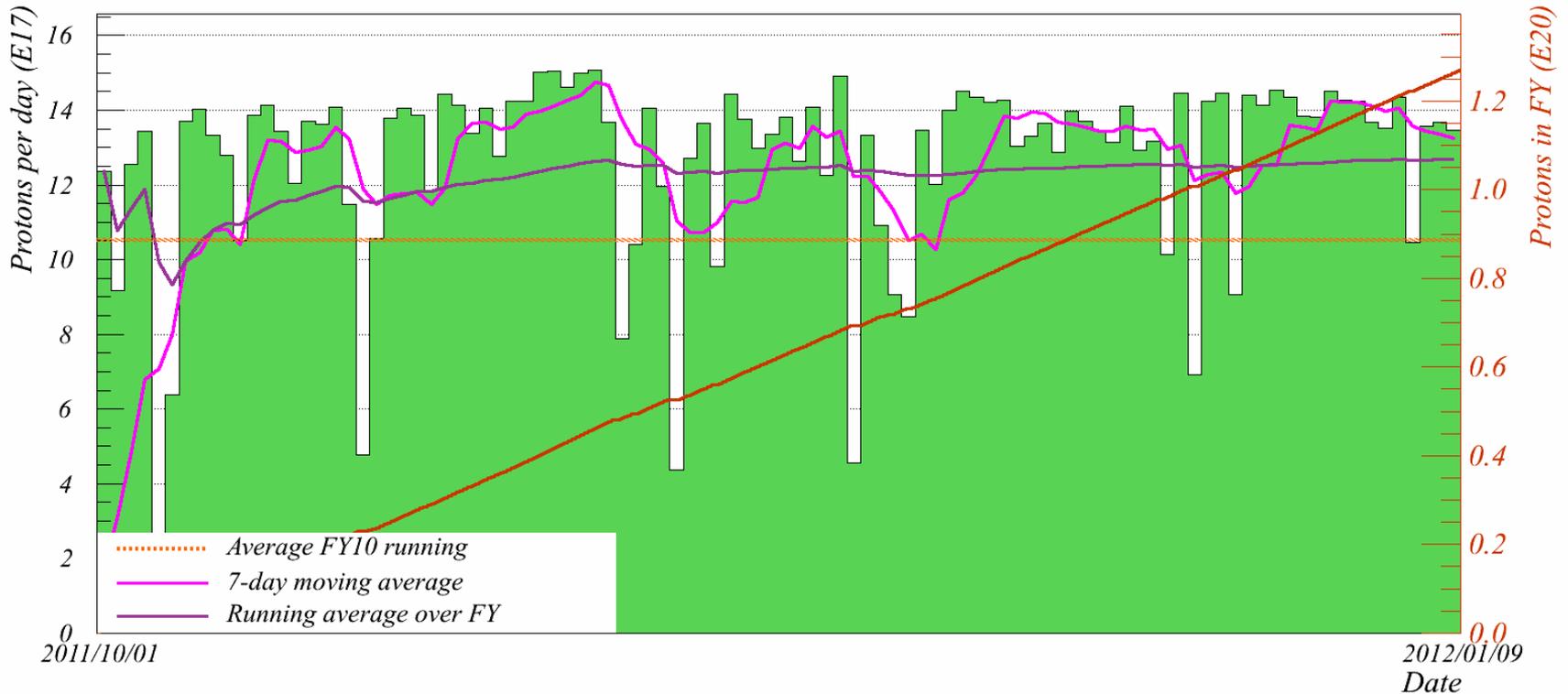




# FY2012 Protons

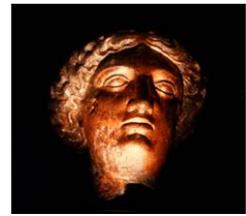


*FY12 NuMI protons to 00:00 Monday 09 January 2012*





# NuMI Protons over History



*Total NuMI protons to 00:00 Monday 09 January 2012*

