

The MINERvA Operations Report

All Experimenters Meeting

Howard Budd, University of Rochester
Mar 12 2012

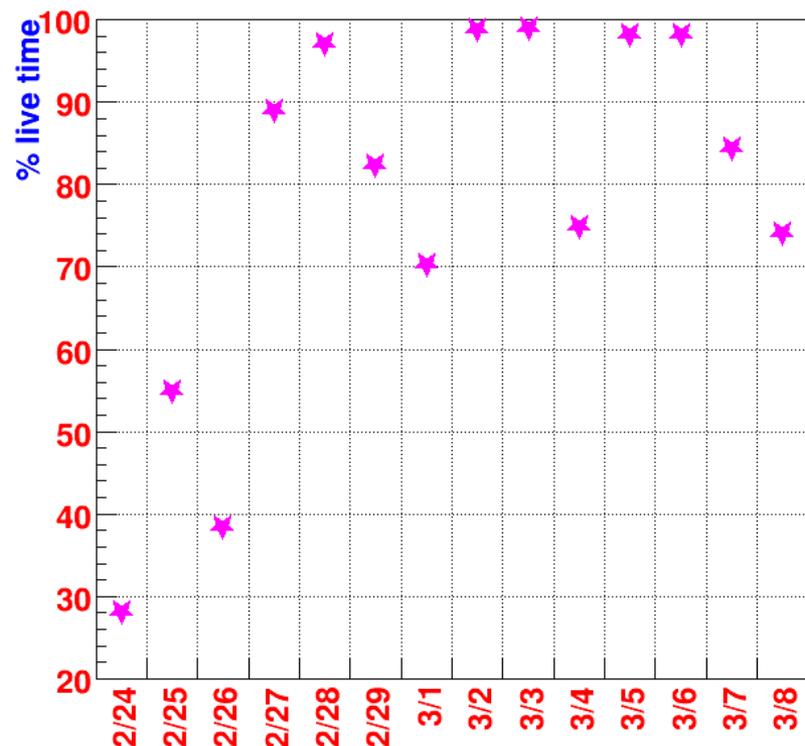




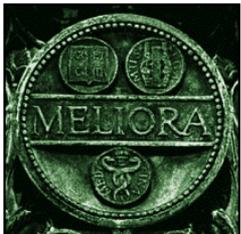
ν Data

% live time
Feb 24-Mar8

From	To	POT	MINOS Live time	MINERvA Live time	Live time
24-Feb-2012	1-Mar-2012	8.03E+18	96.8%	70.0%	67.8%
2-Mar-2012	8-Mar-2012	9.07E+18	99.0%	89.9%	89.0%
24-Feb-2012	8-Mar-2012	1.71E+19	98.0%	80.6%	78.9%



- 20.25×10^{19} POT with NT-07
- 18.94×10^{19} POT for ν , Oct 6 – Mar 11, LE10 with NT-07
- 0.83×10^{19} POT for ν , Mar 5-11
- Except for Mar 4, the low efficiency was due to the matching between events in the data and events in the beam data process from ACNET. This can be seen by looking at how continuous our data taking is. We can recover this data.



March 4



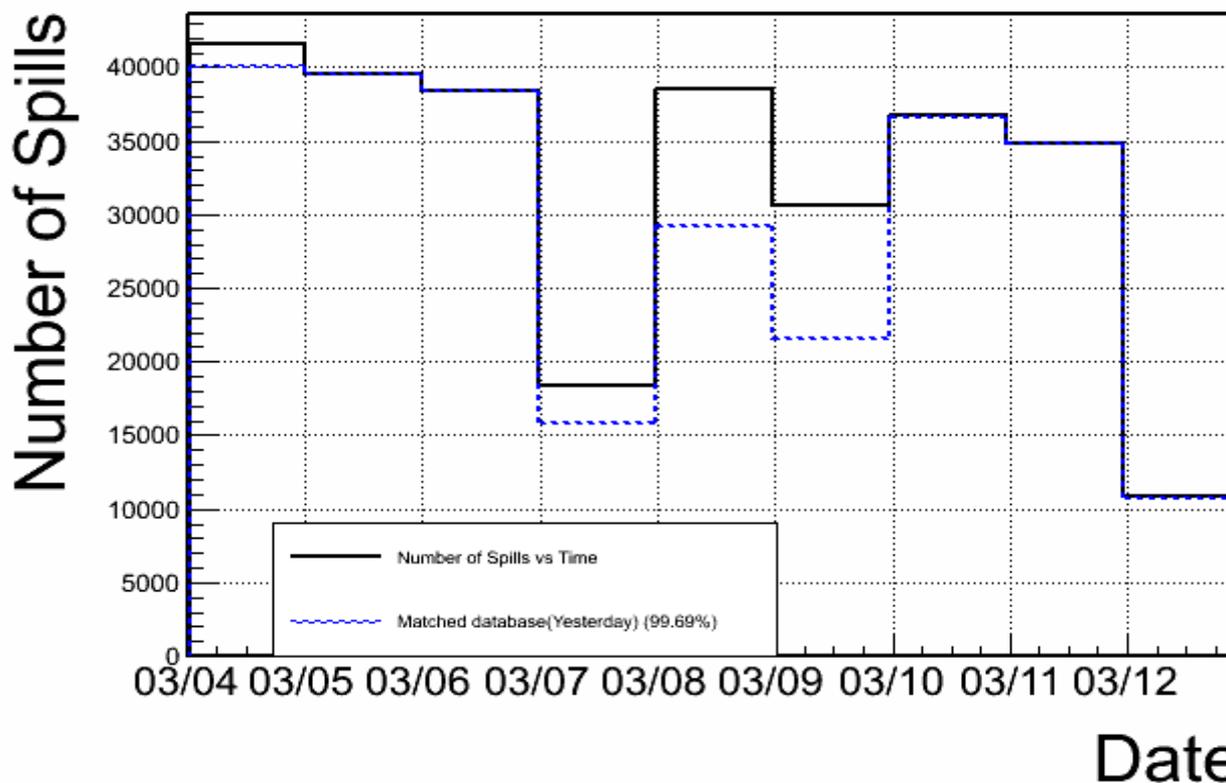
- On Mar 4, there was a hardware failure a module, called the CROC, in the VME crate which caused a 5 ½ hour down time. This failure has not happened before.
- The shifter did not notice DAQ had stopped for about 4 hours. Not sure if the DAQ stopped in some way which make it harder to tell the DAQ had crashed.
- When the run number was not incrementing as expected the Expert Shifter was called.
- The problem was tied to channel in the CROC card and the power cycling the VME crate fixed the problem.



Beam Data Process



Number of Spills vs Time



- Shows efficiency of transferring data from AD to file in CD to form MINOS beam data base, which MINERvA uses.
- The black line and dotted blue lines should agree
- The problem stated after the Mar 7 shutdown and was fixed on Mar 9 by Charles King's group. Problem was due to bad hardware.



Empty He Target



- Bob Sanders et al. started emptying the He target starting at 8:30 AM today.
- The target should be at 1% of full (liquid) target density on Friday noon. At this point we can use the target for empty target data.
- Current data still good for all Non-Helium analyses
- During this period of time, we are replacing the veto HV system of bulk HV supply and a cow with D0 style HV system.
 - The crate and supply will be installed today
 - They system should be operational on Friday, Mar 16, at noon
 - This gives us remove control of the supply. This powers two counters which were not powered with the HV supply and cow, These counters are not in the fiducial volume.



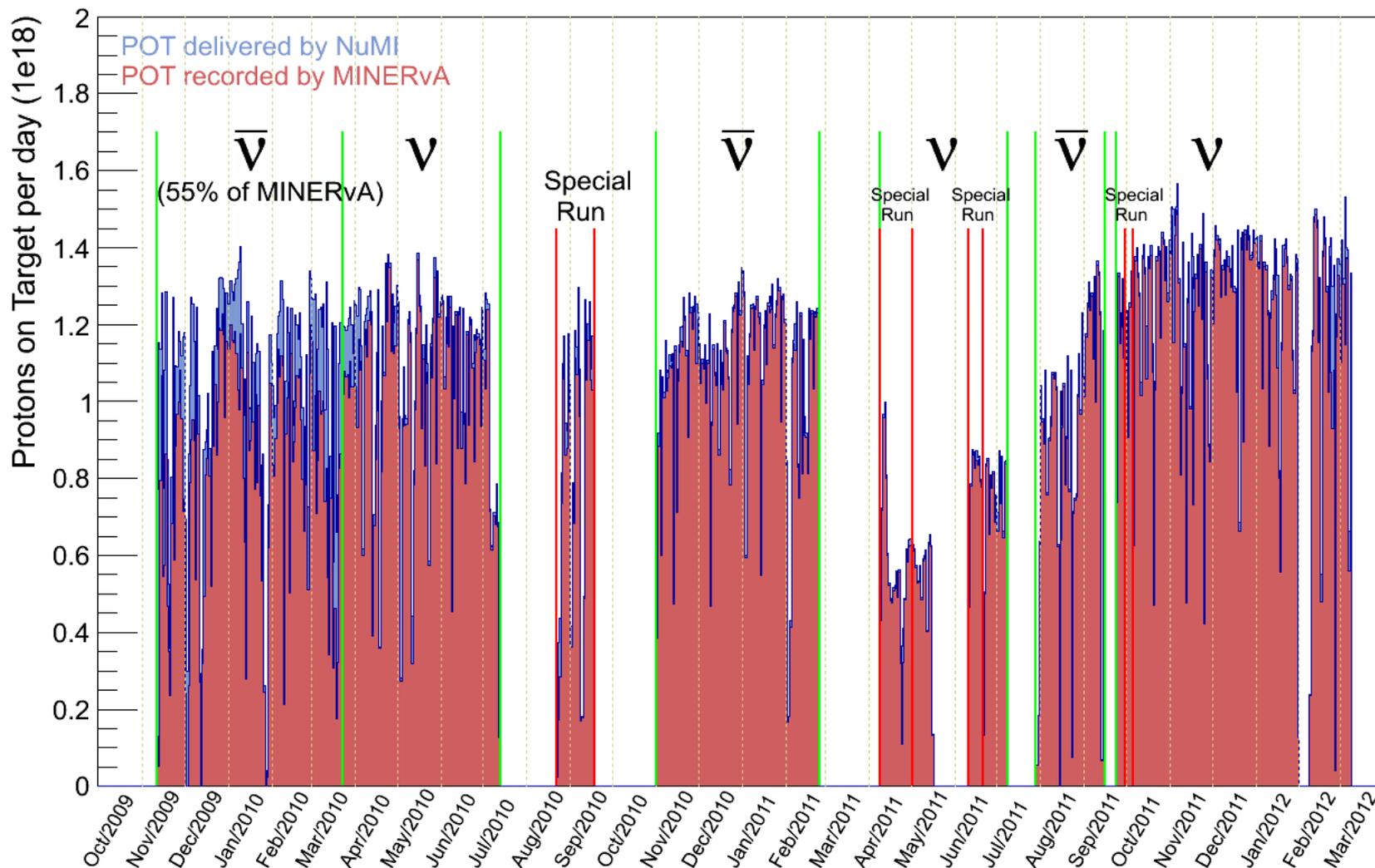
HV Varying Problem



- The “PMT Varying Problem” is when the HV of a tube will vary 10-20 volts. This happens for 1-2 hours with maybe with week or two interval between the variation. If it happens twice for a tube we replace the FEB. If it continues to happen after the FEB replacement then we replace the PMT. It has to happen a 2-3 times a week before we replacement of the PMT. These replacements are almost always during beam downtimes.
 - We replaced a PMT which had the “HV Varying Problem”
 - First PMT replacement since Dec 2010
 - We replaced a FEB which had the “HV Varying Problem”

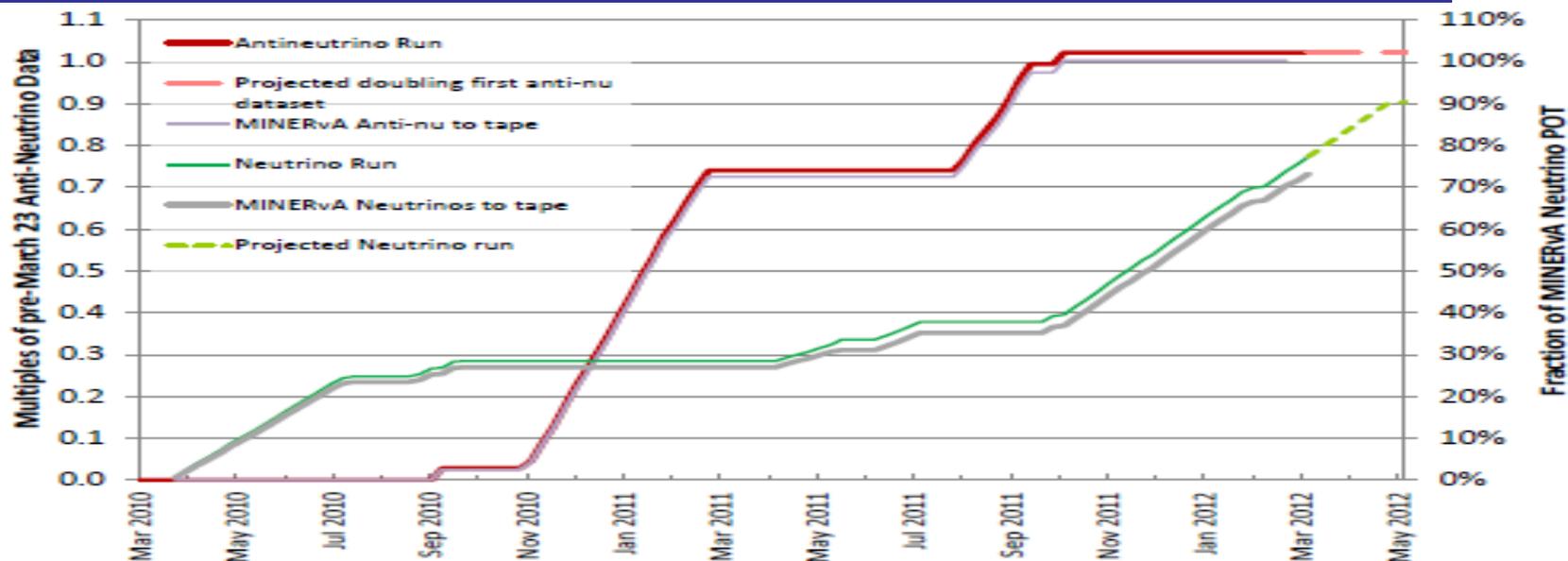


MINERvA POT/Day Nov 2009 - Present





Accumulated POT to Feb 23



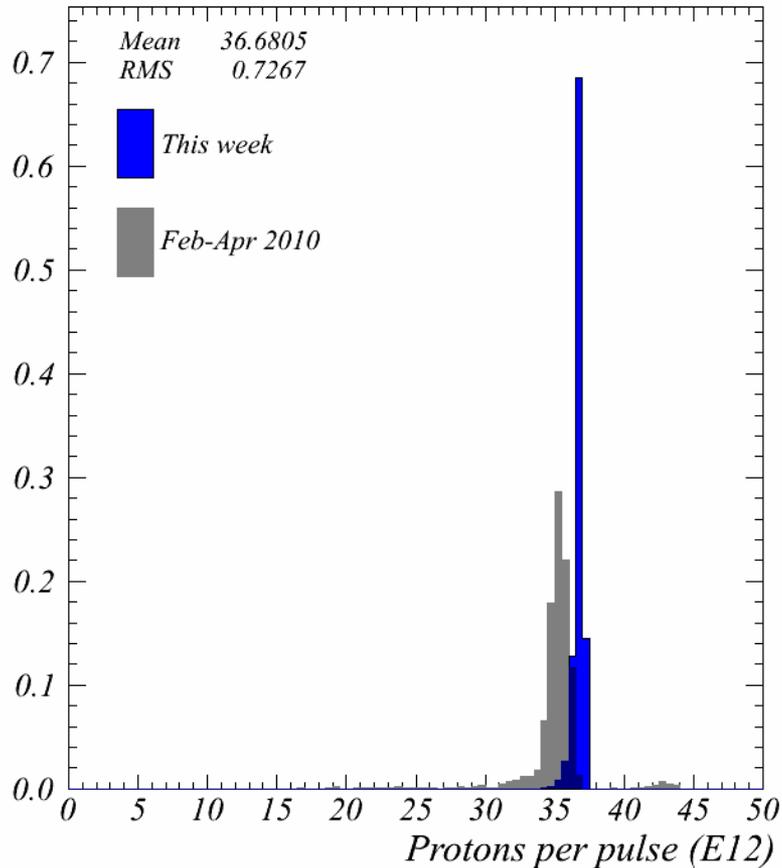
- Anti- ν run, full scale corresponds to 1.76×10^{20} POT
 - # POT for collected for anti- ν before Mar 23 10, official start of MINERvA ν run
- NT02 running gives enough anti- ν data for doubling of the 1st anti- ν data set.
- Minerva run, full scale corresponds to 4.9×10^{20} POT
 - # for which MINERvA project & experiment were reviewed & the detector built.
- Projected assumes 1.25×10^{18} POT/day
 - # POTs – average from Oct 2011 to now.



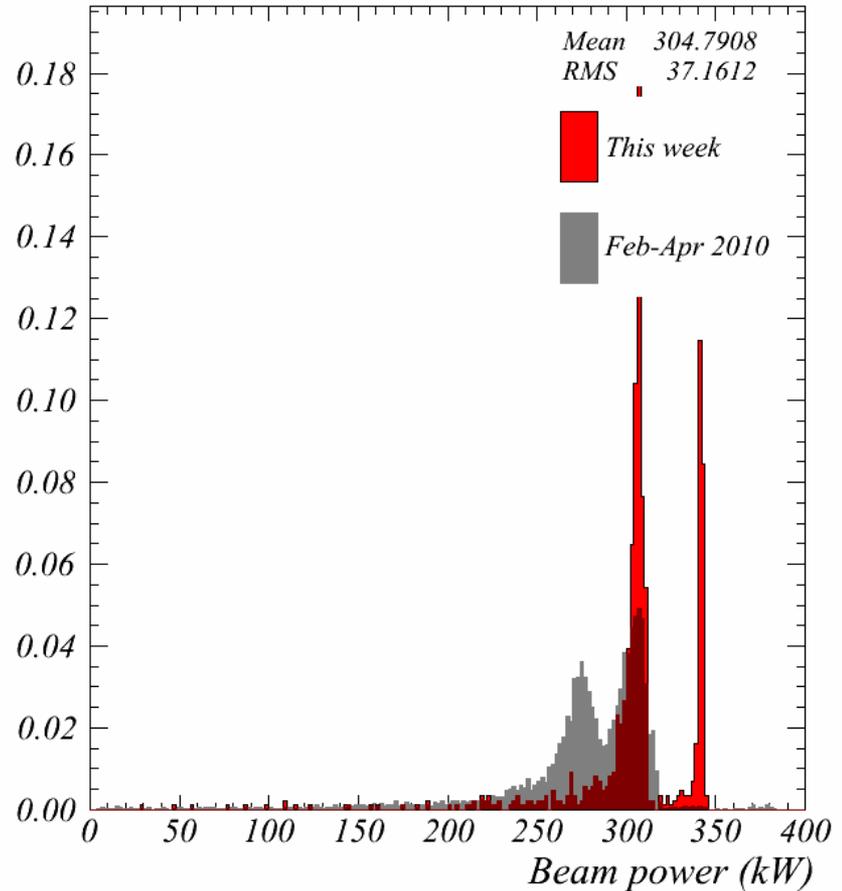
NuMI Beam Plots



Week ending 00:00 Monday 12 March 2012

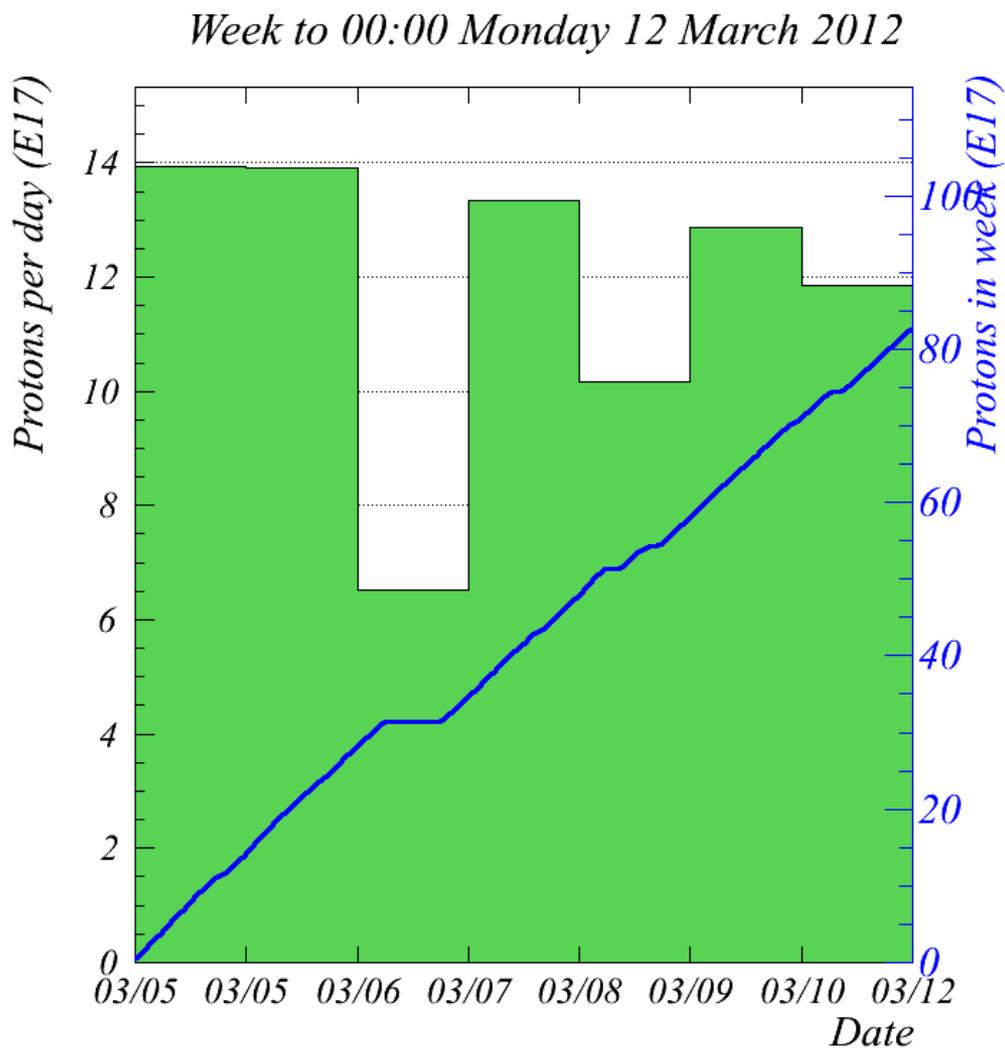


Week ending 00:00 Monday 12 March 2012





Protons for the Week

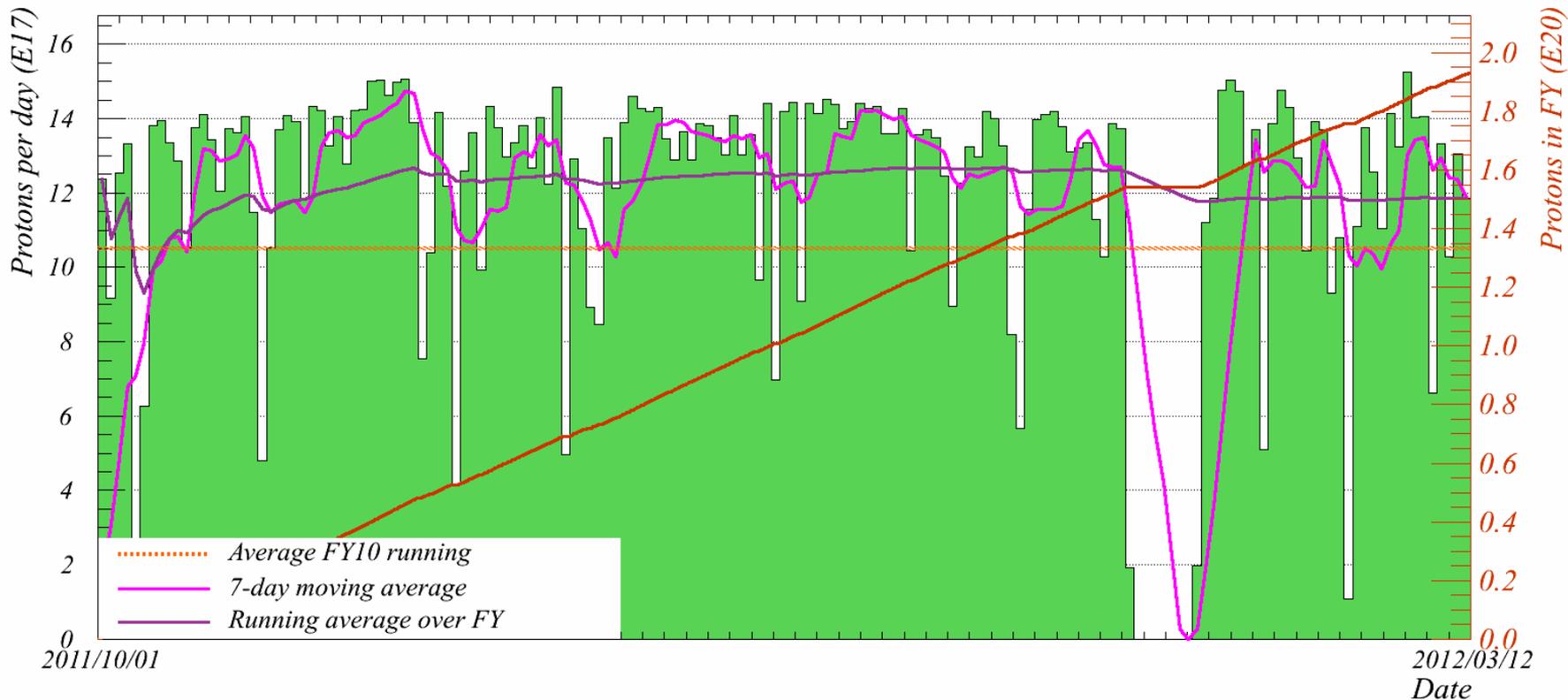




FY2012 Protons



FY12 NuMI protons to 00:00 Monday 12 March 2012





NuMI Protons over History



Total NuMI protons to 00:00 Monday 12 March 2012

