

The MINERvA Operations Report

All Experimenters Meeting

Howard Budd, University of Rochester
Feb 16, 2015

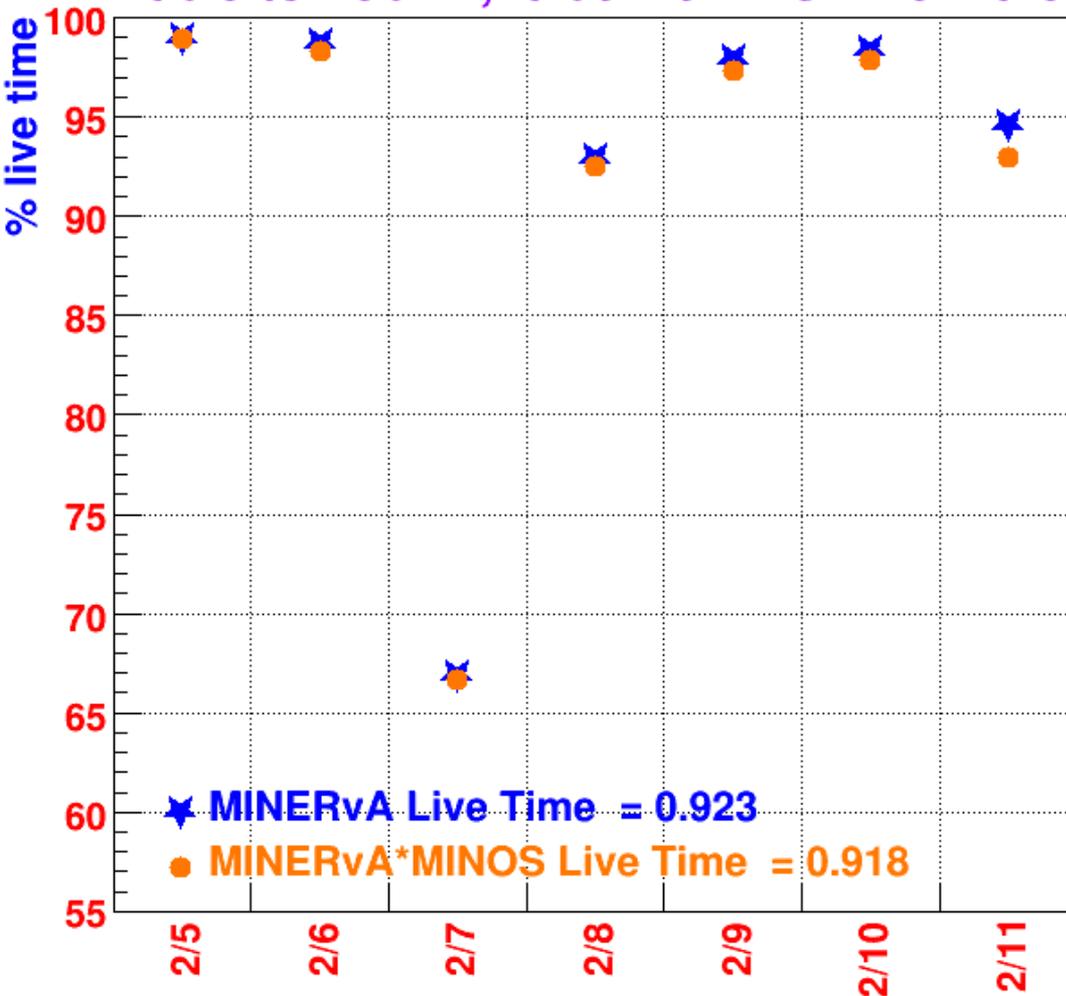




ν Data



Feb 5 to Feb 11, 0.66×10^{19} POT Delivered



- Live time, Feb 5 – Feb 11
- MINERvA 92.3%
- MINERvA*MINOS 91.8%
- Discuss live times on the next several pages



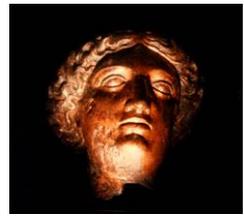
v Data



- Feb 7 – 66.9% live
 - DAQ hung at ~2:30 AM. The shifter tried to contact a variety of experts but they did not respond until 7:30 AM. It took about 1 hour to fix the problem, as startup script still contained a reference to `mnvonline0` instead of `mnvonline03`.
 - We are changing our contact procedure.
- Feb 8 – 92.6
 - When switching from LI to beam mode when beam came back the DAQ hung. This restarting of the DAQ required manual intervention by the expert. We are changing our procedure for running LI.
 - There were some unprocessed runs, possibly from the Header Problem, to be discussed later.



v Data



- Feb 11, 94.5%
 - The DAQ was stopped to upload a change in the nearline code. This code by Donatella was described in last weeks meeting and will be discussed later. This caused a down time of about 20 minutes. This is the only inefficiency seen in upTime.
 - Hence, seem we have some calculated inefficiency due to either files not processed or the Header Problem.



DAQ header problem



- DAQ header problem
 - The frame length is in the data header twice. The offline code looked at the 1st frame length .The 1st frame length is occasionally wrong, but the 2d frame length appeared to be correct.
 - If we get a wrong frame length, the frame cannot be analyzed and the offline stops with the remaining events in the subrun not analyzed.
 - By getting the correct frame length for that event we can analyze all the events in the subrun
 - Became more frequent with mnvonline03 as the DAQ computer
- On Feb 11, Donatella put a fix in the offline. This would enable us to analyze all the events in a subrun which has the error. Her code looks at both these frame lengths and if they are different picks the second.
 - This fix recovered almost all the runs.
 - However, occasionally the 2d frame length is not correct.



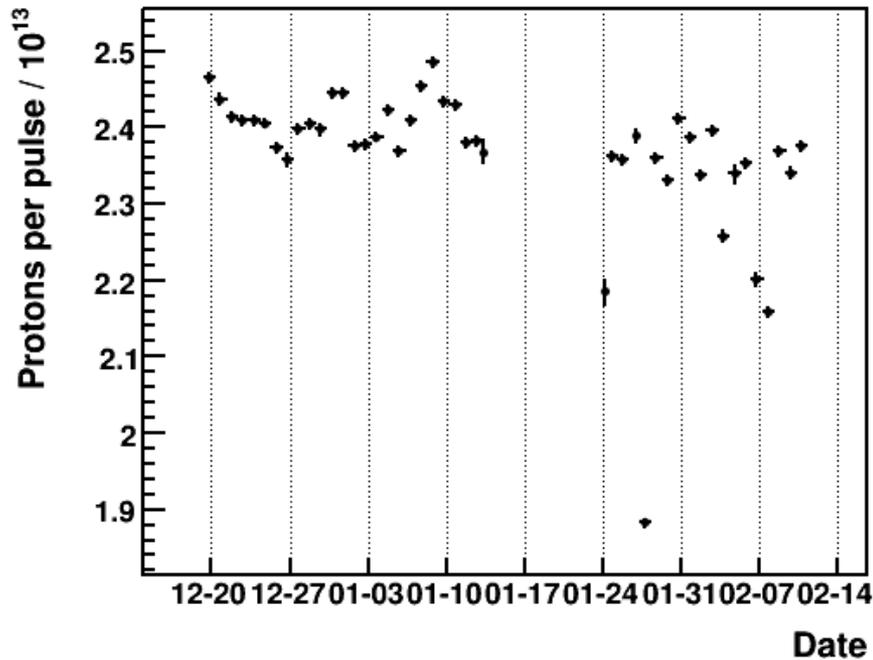
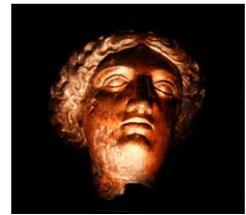
DAQ Header Problem



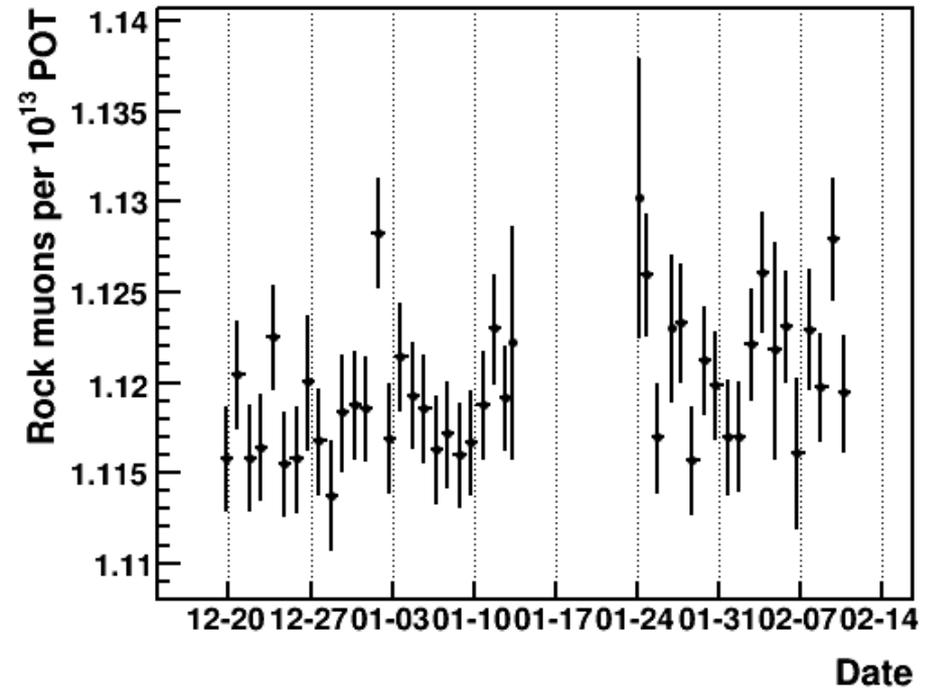
- We are investigating the 2d frame length error and will be talking to Christian Gingu about this.
- We may decide to do make a change on the detector during the Feb 18 shutdown to address this problem.
 - This is the only detector issue we will work on during the shutdown.
- We are investigating the effect the DAQ header problem has on our calculated live times.



Rock Muons/POT



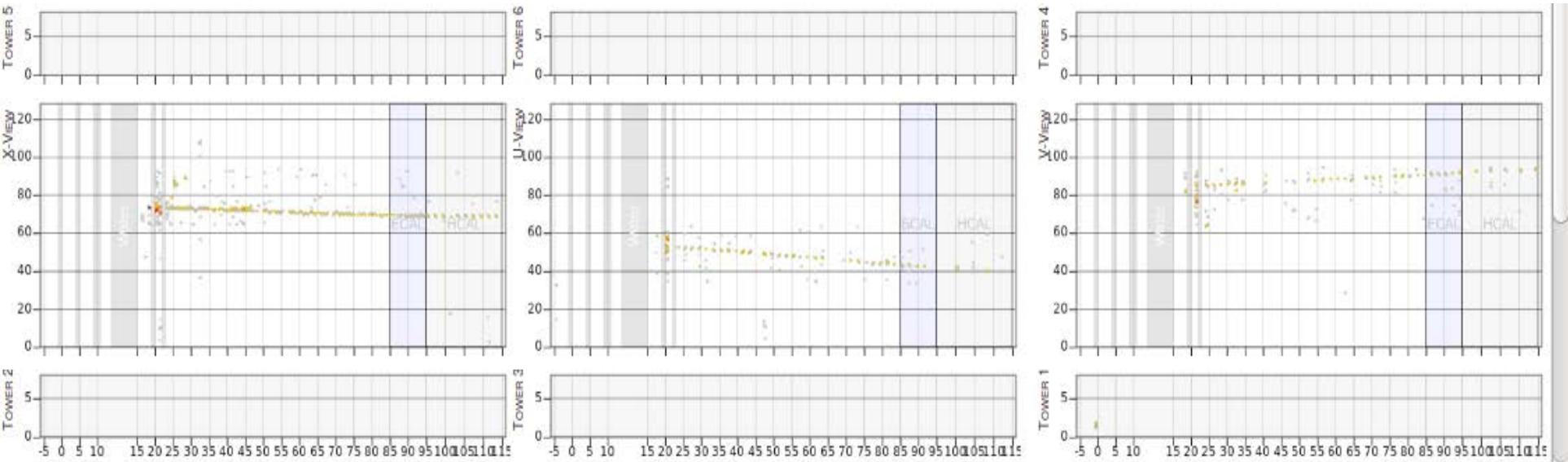
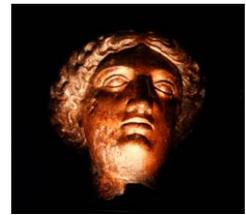
POT/Pulse



Rock Muons/POT



Event Display



X View

V View

U View

Nuclear Target Event



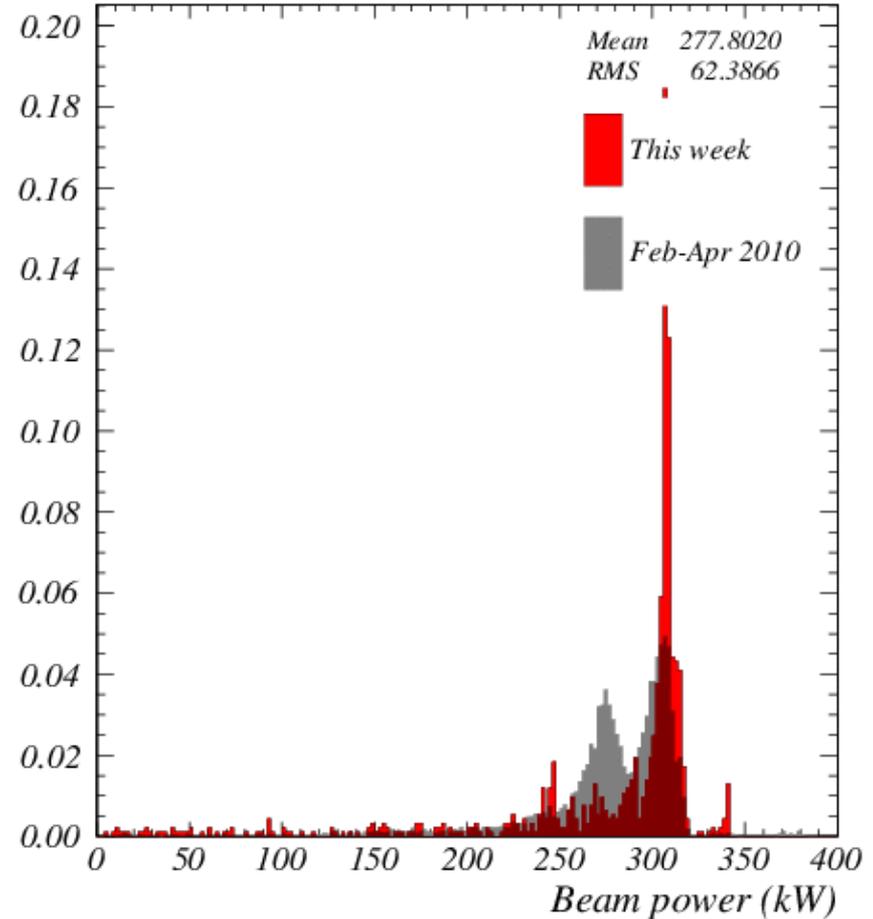
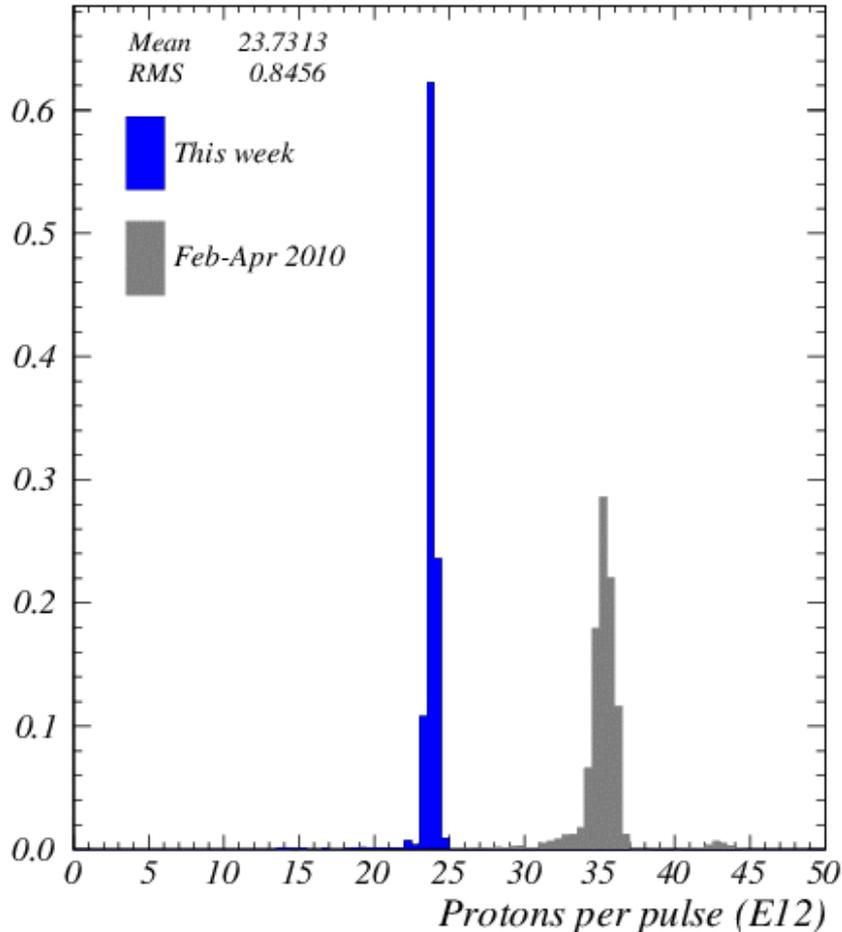
NuMI Beam Plots

Feb 9 - 15, 2015



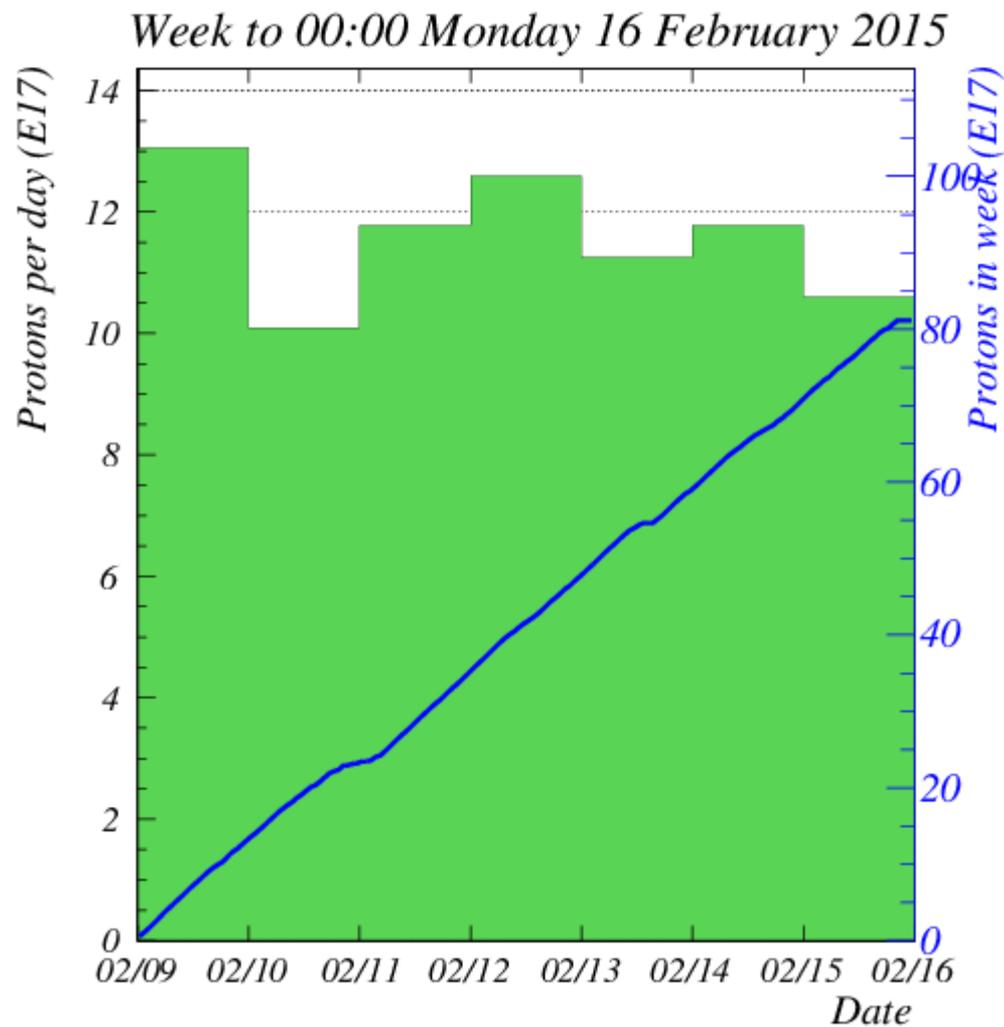
Week ending 00:00 Monday 16 February 2015

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Protons for the Week



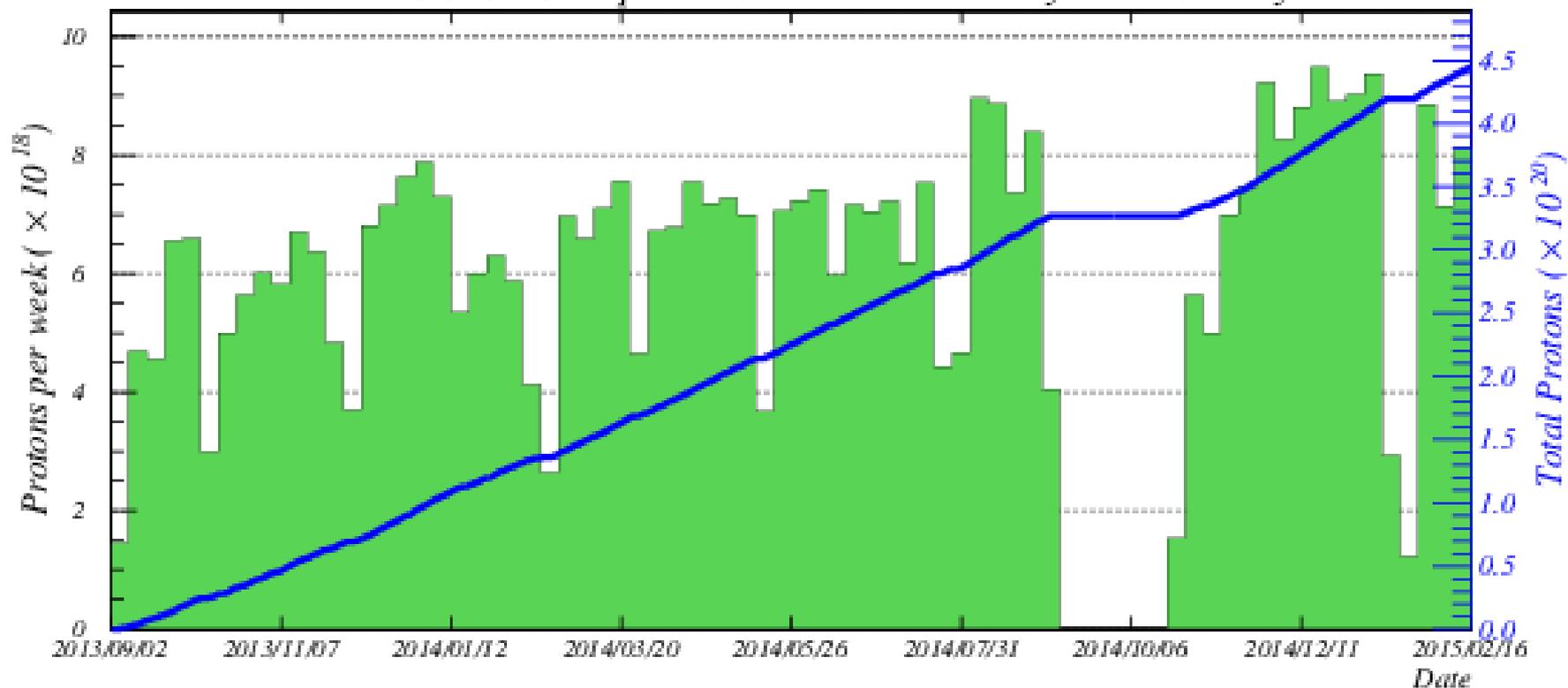
0.81×10^{19} POT
Feb 9 – 15, 2015



Protons for ME Run



Total MINOS+/NOvA protons to 00:00 Monday 16 February 2015



44.41×10^{19} POT

Sep 6, 2013 at 15:00 – Feb 15, 2015