

The MINERvA Operations Report

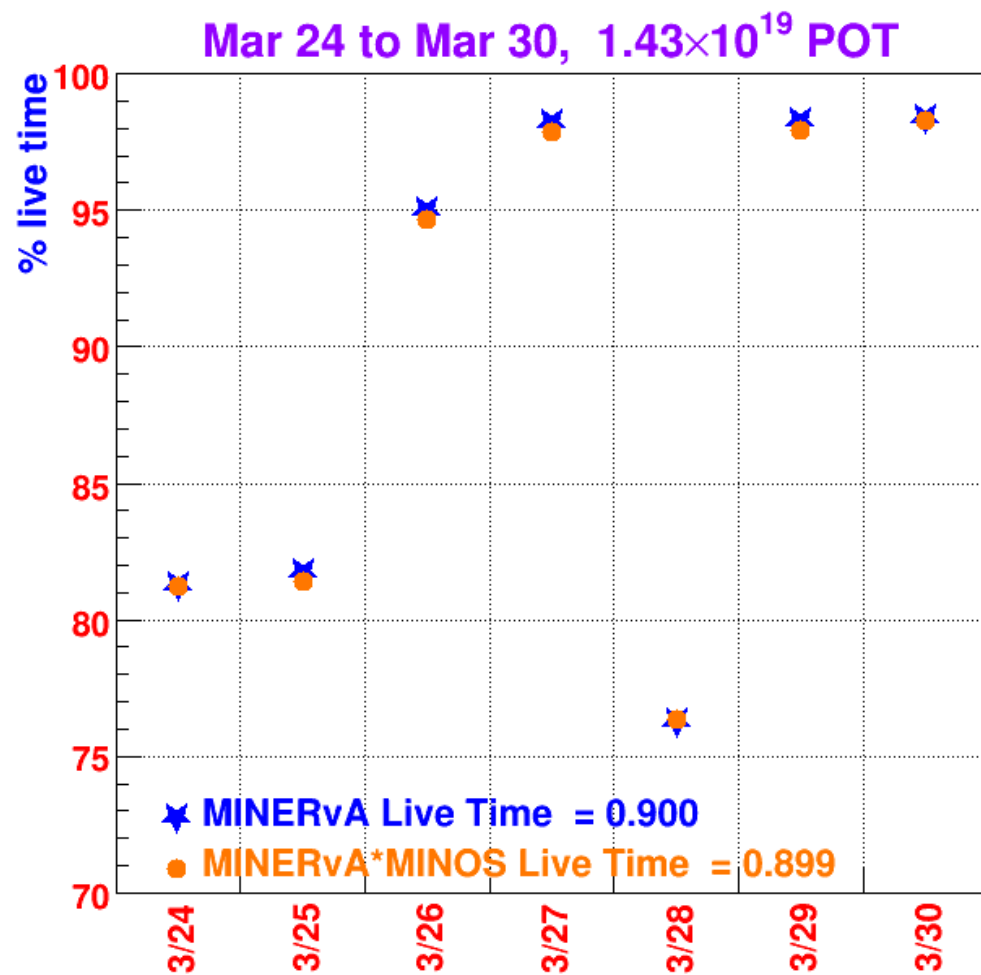
All Experimenters Meeting

Howard Budd, University of Rochester

Apr 4, 2016



v Data



- Live Time – Mar 24-30, 2016
- 1.43×10^{19} POT
- MINERvA 90.0%
- MINERvA*MINOS 89.9%



v Data



- Mar 24 – 81.2% , Mar 25 – 81.7%
 - We were having HV problems with tube 1-2-3-7. They started 1 year ago. We replaced the FEB in May 2015. In the beginning of March, the HV problems came back, with the HV of the PMT possibly damaging the FEB.
 - On Mar 24 chain 1-2-3 stopped the DAQ twice. In addition we could not bring up the HV for this PMT.
 - We replaced the PMT & FEB. This required removing the roof.
 - Thanks to Roberto Davila of PPD & John Voirin's group
 - According to our online monitoring, the tube had no hits.
 - We replaced it with another tube and the tube had hits. We started taking data.



v Data



- Although 1-2-3-7 worked when we replaced the PMT, on Mar 25 the data for 1-2-3-7 was bad.
- We returned to the MINOS Hall and after an investigation, we determined the chain in the CROCE was bad. This is the 1st time a chain in a CROCE had failed.
 - A CROCE has 4 chains. Chain reads out 2-10 FEBs
- 1 of the 7 CROCEs in this crate had a spare chain.
- With the v95 upgrade last summer, the DAQ often has errors if CROCEs are replaced, switched, or power cycled. These can causes the DAQ to not run.
- We elected not to disturb the CROCE modules and we moved the detector cables from 1-2-3 chain to the spare chain.
- We were immediately able to take data with the data being fine.



v Data



- This changed the map (called the “Plex”) from electronics space to detector space. We have been successful in fixing the Plex, and we are resolving the remaining issues.
- We also replaced a FEB which reset itself in the past. It was on chain 0-4-0 which had been giving DAQ errors. The FEB could only be replaced with the roof off.
- May 26 – 95%.
 - DAQ error on chain 1-3-1. This chain gave a DAQ error about 3 weeks ago. Other than that, it hasn't given either DAQ or unpacking errors.



v Data



- Mar 28 – 76.2%
 - With the detector problems fixed, John Voirin's group installed the roof to prevent debris from falling on the detector. This required turning off the HV. After the roof goes on, we do a light leak check. For some reason, we got a lot of DAQ errors during this period even though we did not disturb the VME crates or detector.
- Mar 30
 - During the beam downtime, we reset two chains, one giving unpacking errors and the other giving DAQ errors. We haven't had any errors since then.



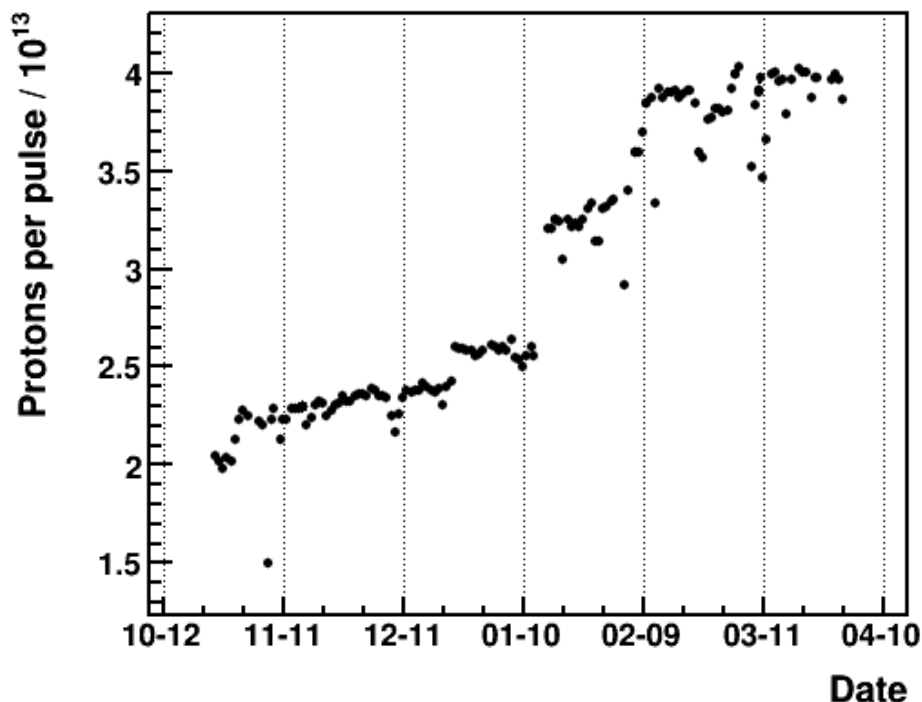
Apr 6 Beam Down Time



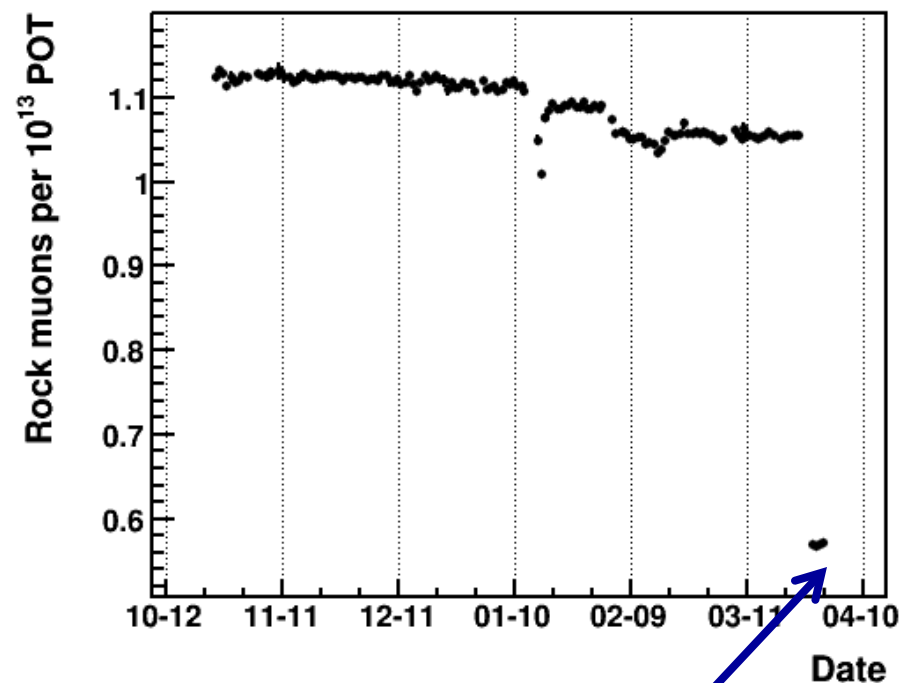
- We have no work planned for the beam down time. All the previously planned work has been described.



Rock Muons/POT



POT/Pulse

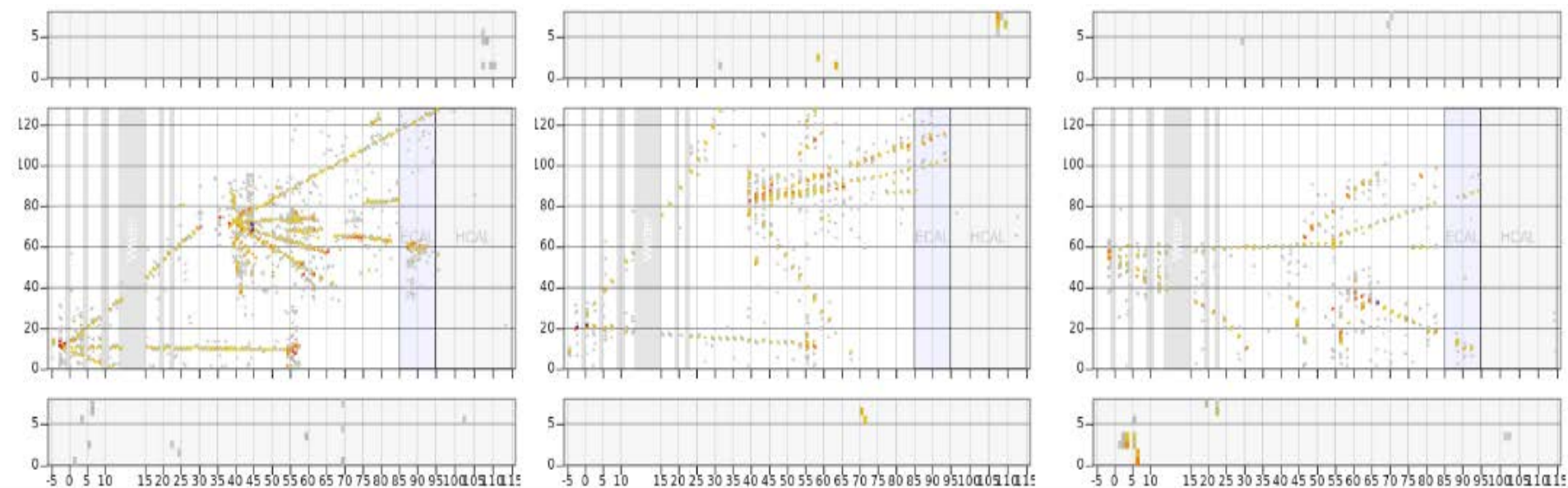


Rock Muons/POT

- The residual effect of the electronics space map not begin changed in the offline. $\sim 1/2$ of the rock muon tracks are not found.



Event Display



X View

V View

U View

Nuclear target and tracker event in
the same time slice

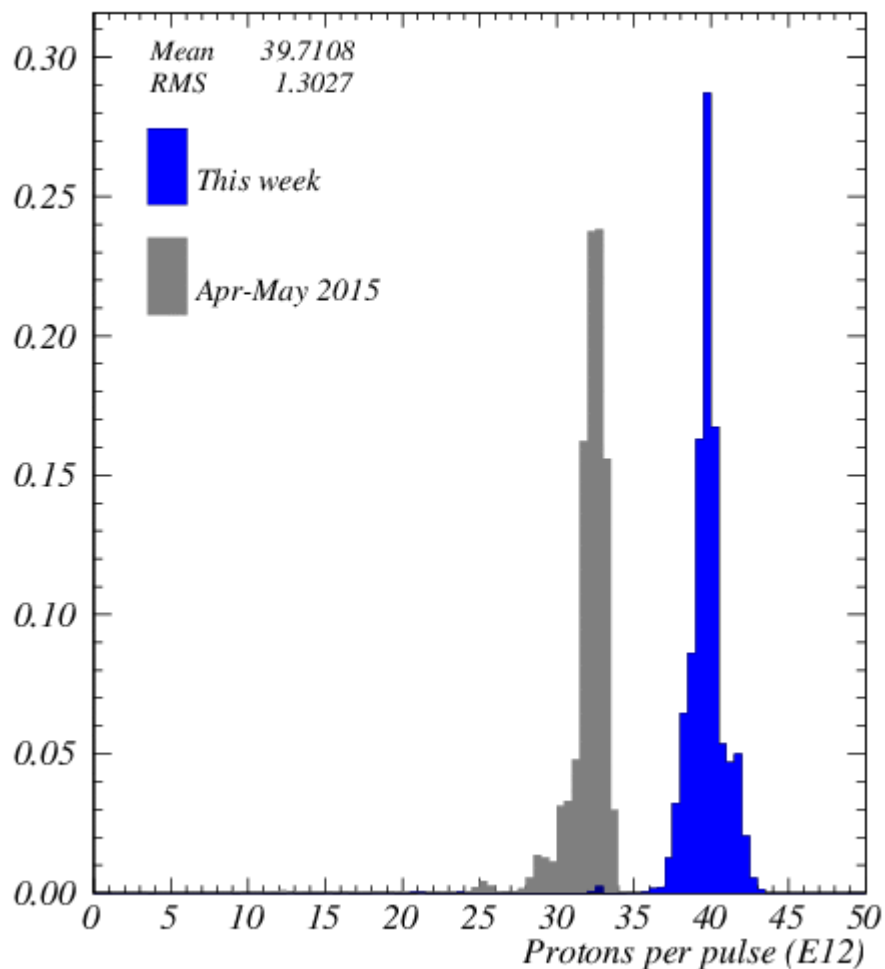


NuMI Beam Plots

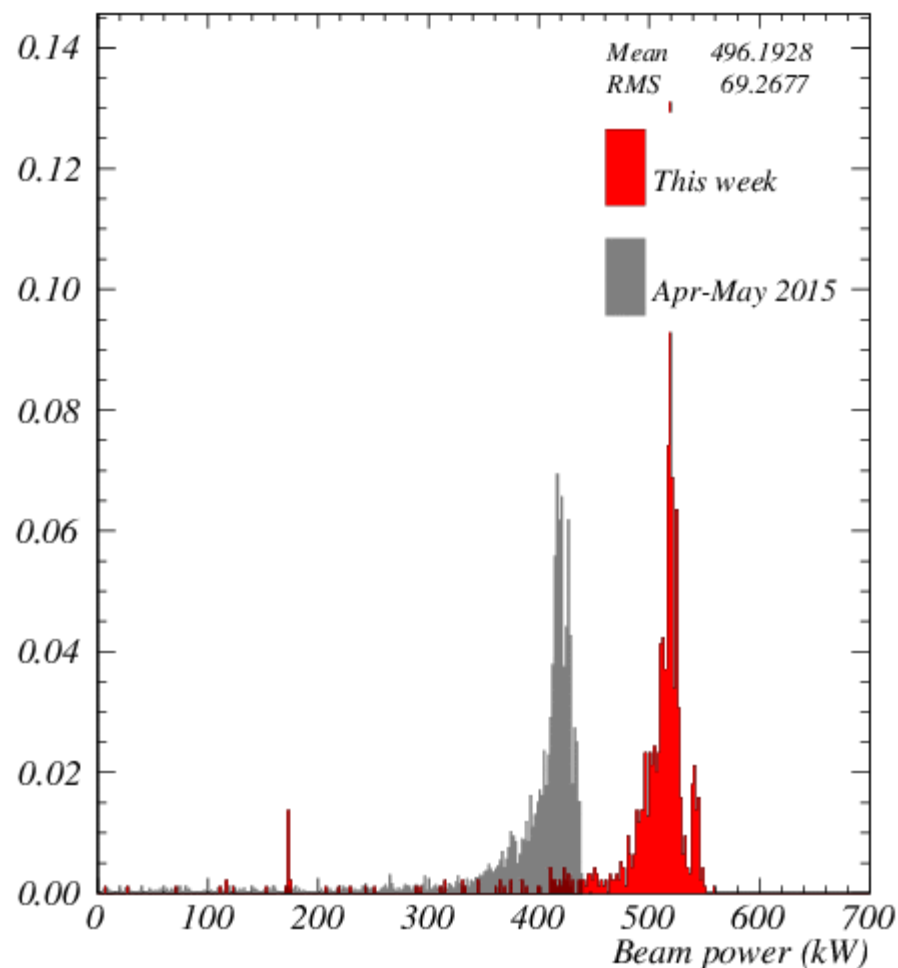
Mar 28 – Apr 3, 2016



Week ending 00:00 Monday 04 April 2016

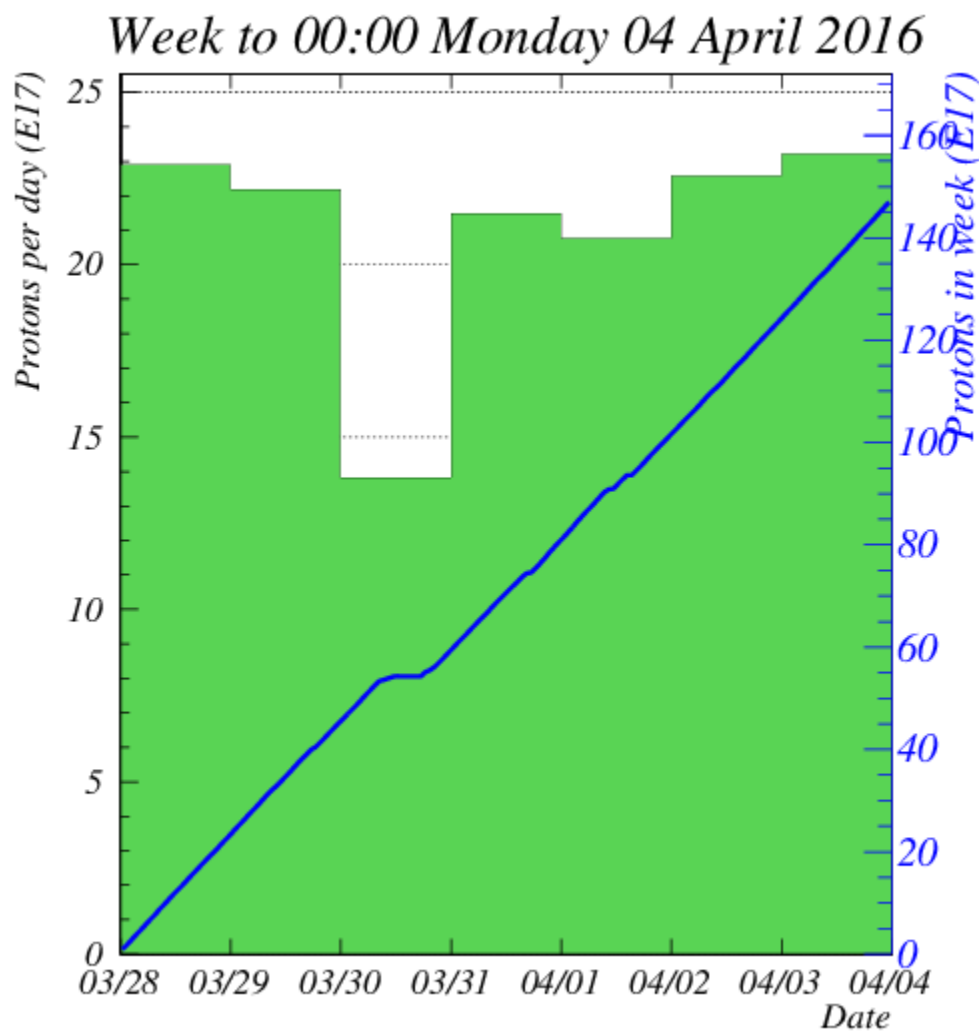


Week ending 00:00 Monday 04 April 2016





Protons for the Week



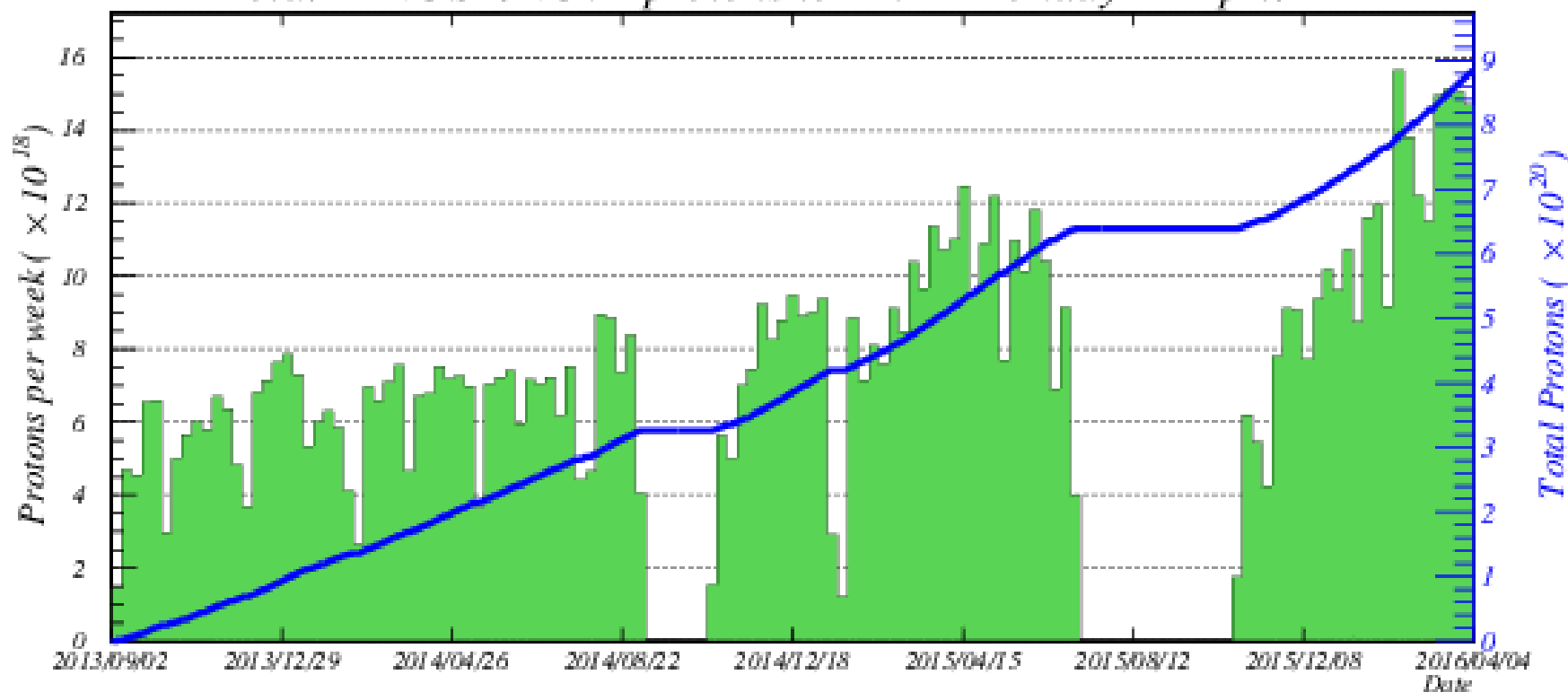
1.47×10^{19} POT
Mar 28-Apr 3, 2016



Protons for ME Run



Total MINOS+/NOvA protons to 00:00 Monday 04 April 2016



88.43×10^{19} POT - Sep 6, 2013 – Apr 3, 2016