

The MINERvA Operations Report

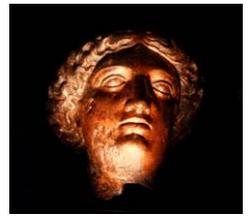
All Experimenters Meeting

Howard Budd, University of Rochester

Jun 29, 2015



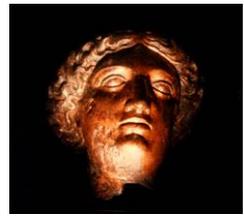
Addition Test Beam Data



- We would like to thank the Lab for the additional test beam time to take the low energy electron data we need in this configuration.



AD Shutdown Work



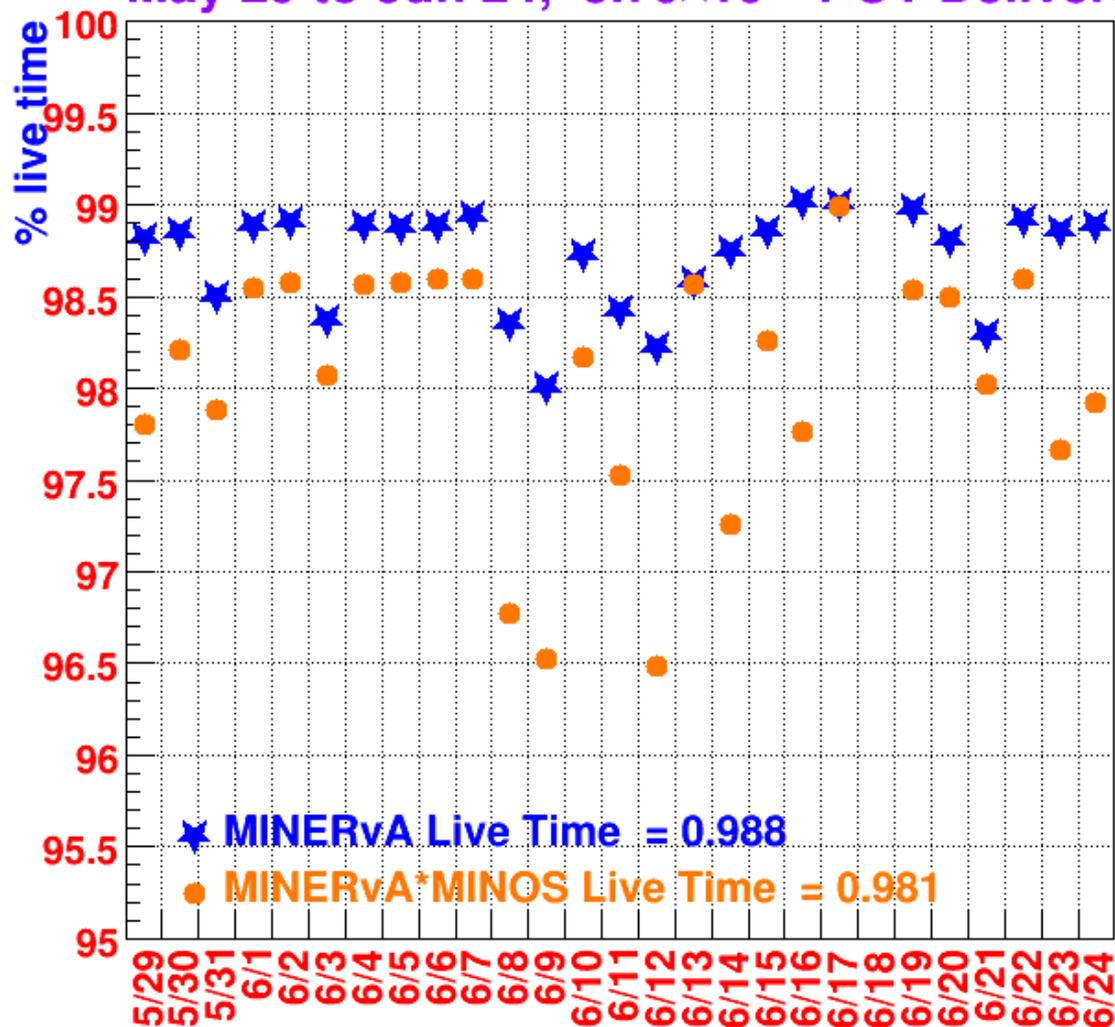
- At the next AEM talk we will discuss our shutdown plans for the MINERvA detector.
- We are planning on emptying the helium target starting starting on July 6.
 - The roof will be removed on early on July 6 and will to back on after the most upstream panel is removed.
 - The he removal will take place during the week of July 6
 - The helium will be saved for AD.



v Data



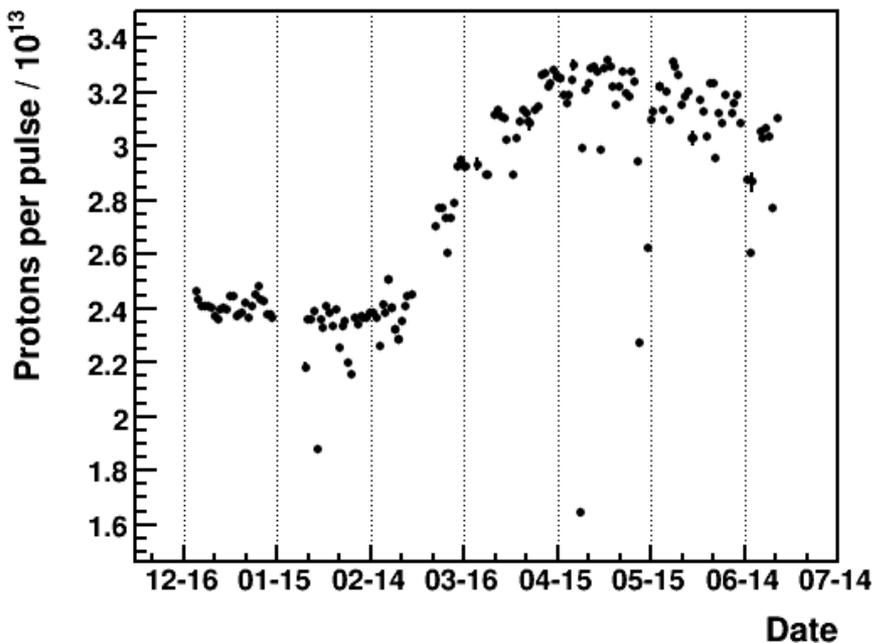
May 29 to Jun 24, 3.79×10^{19} POT Delivered



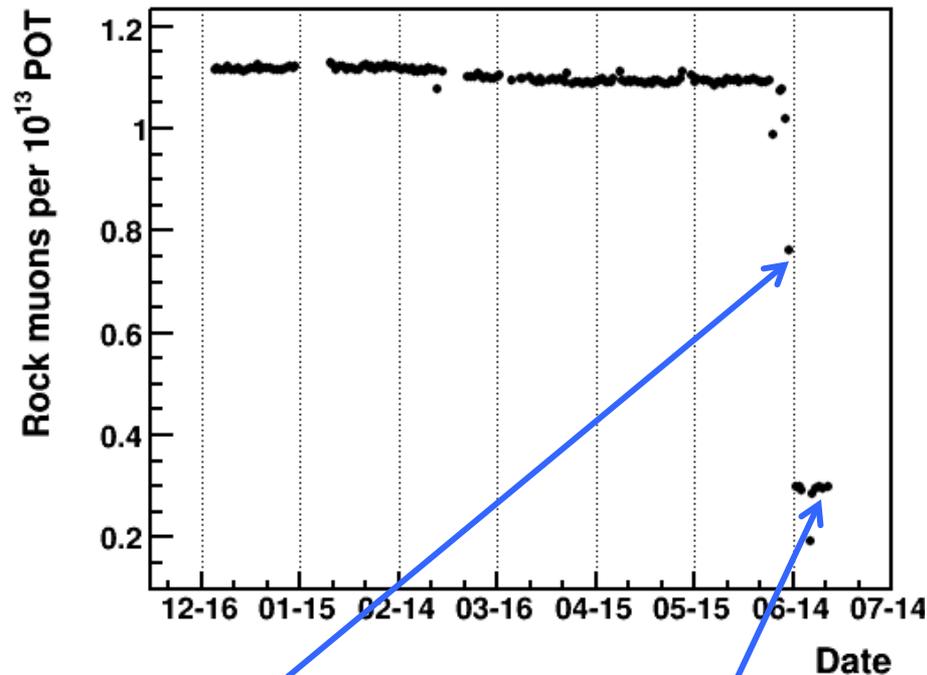
- Live time, May 29-Jun 24, 2015
- 3.79×10^{19} POT
- MINERvA 98.8%
- MINERvA*MINOS 98.1%
- The problems with Keep up processing have been solved, and we are able to calculate live times again.
 - Jun 18 no beam



Rock Muons/POT



POT/Pulse

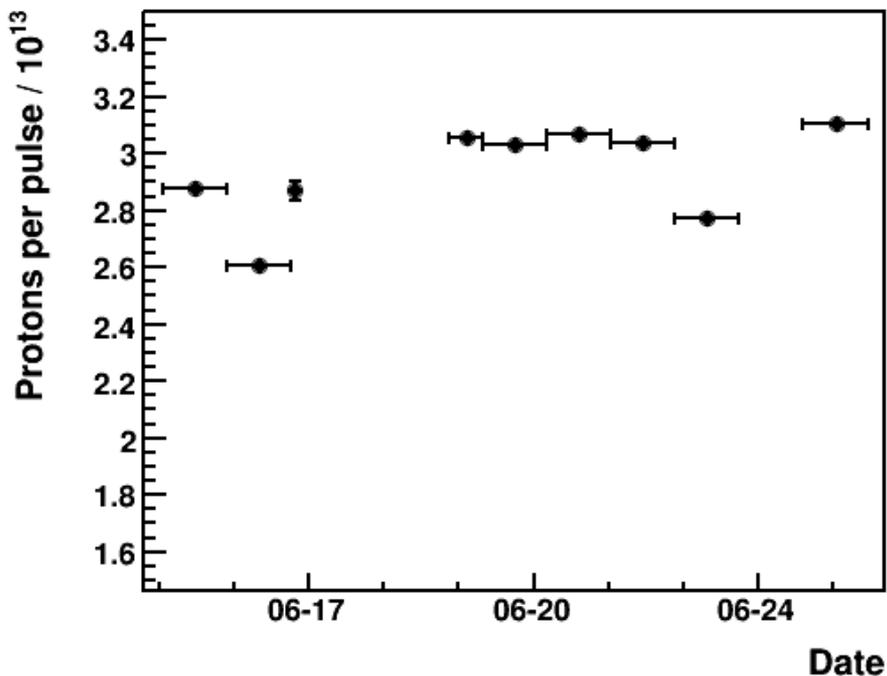


Rock Muons/POT

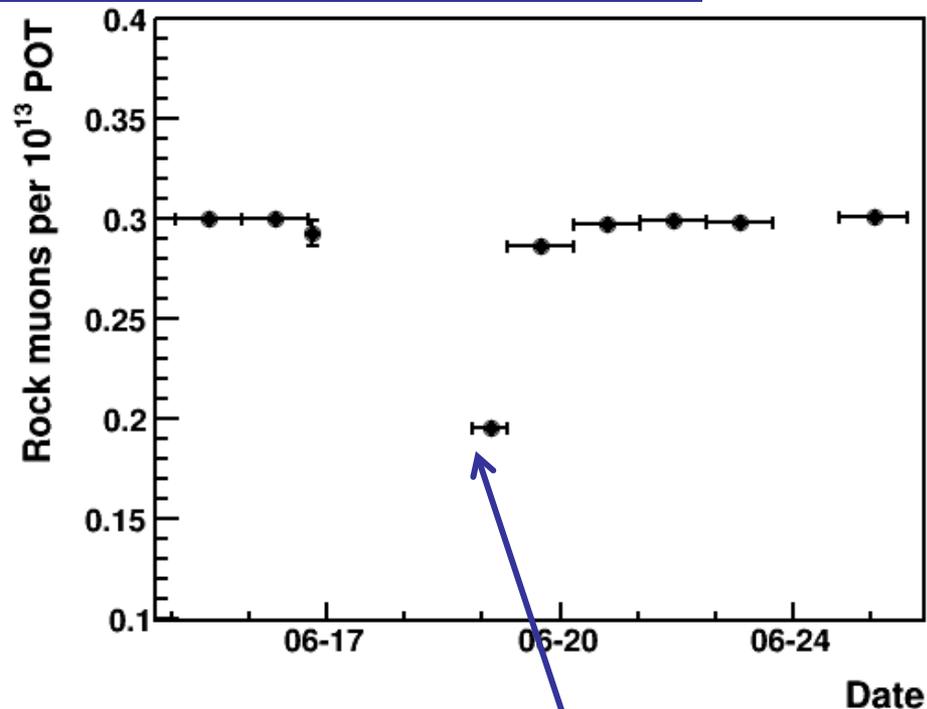
- The recent Rock Muons/POT points are low because of the horn current scans and the horn off running



Rock Muons/POT Horn Off Running



POT/Pulse



Rock Muons/POT

- Rock Muons/POT for the horn off data
- The lower point is due to the routine which reads the POT starts returning the same number each spill
 - We have seen this before

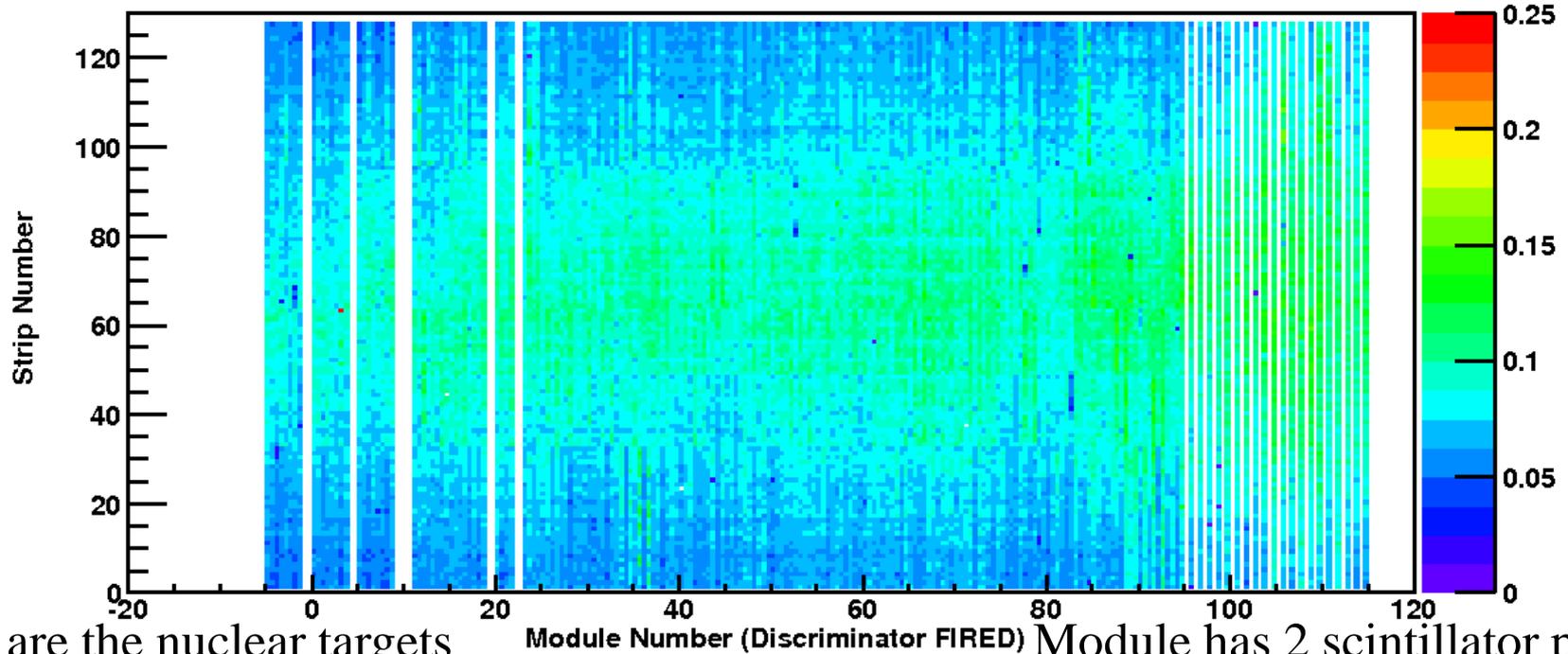


Inner Detector Hit Map, Horn On



Numib NHits/Gate for Strip (y) vs Module (x)

EM Hadron



Gaps are the nuclear targets

Module has 2 scintillator planes

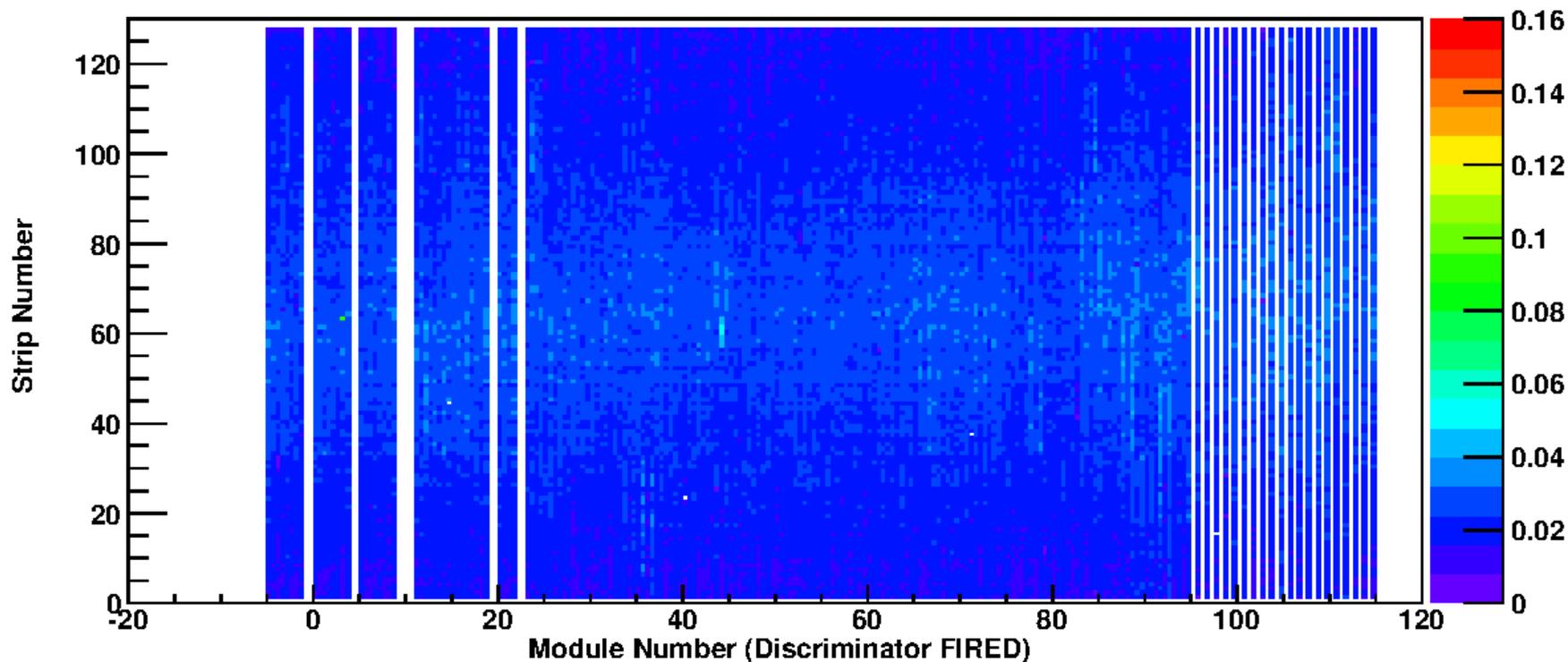
- One way of looking at the stability of the detector is looking at the hit map over all the detector. The detector is readout with 59 chains. Each chain reads out 8 planes on the east or west side. Each chain is a fairly independent readout. The uniformity of the hit map indicates uniformity and stability of the individual readouts.
 - Downstream is the EM & hadron calorimeter, so there are more hits
 - CROC-E readout out 4 chains & there are 7-8 CROC-Es in a crate₇



Inner Detector Hit Map, Horn Off



Numib NHits/Gate for Strip (y) vs Module (x)



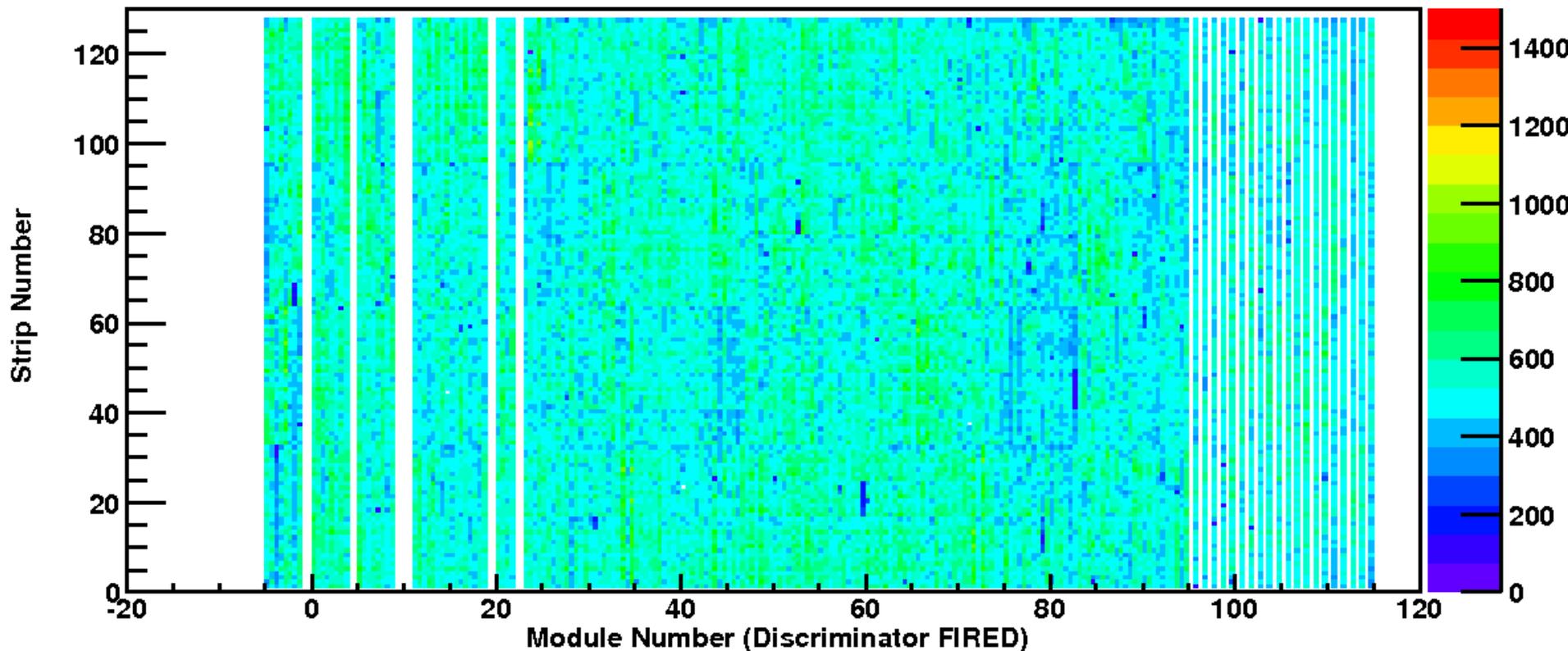
- The horn off hit map looks uniform with the rate of hits down by roughly by a factor of 4.
 - Note the change of the color intensity scale from 0.25 to 0.16.



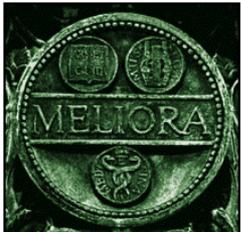
Pulse Height Map, Horn On



Numib AvgQhi for Strip (y) vs Module (x)



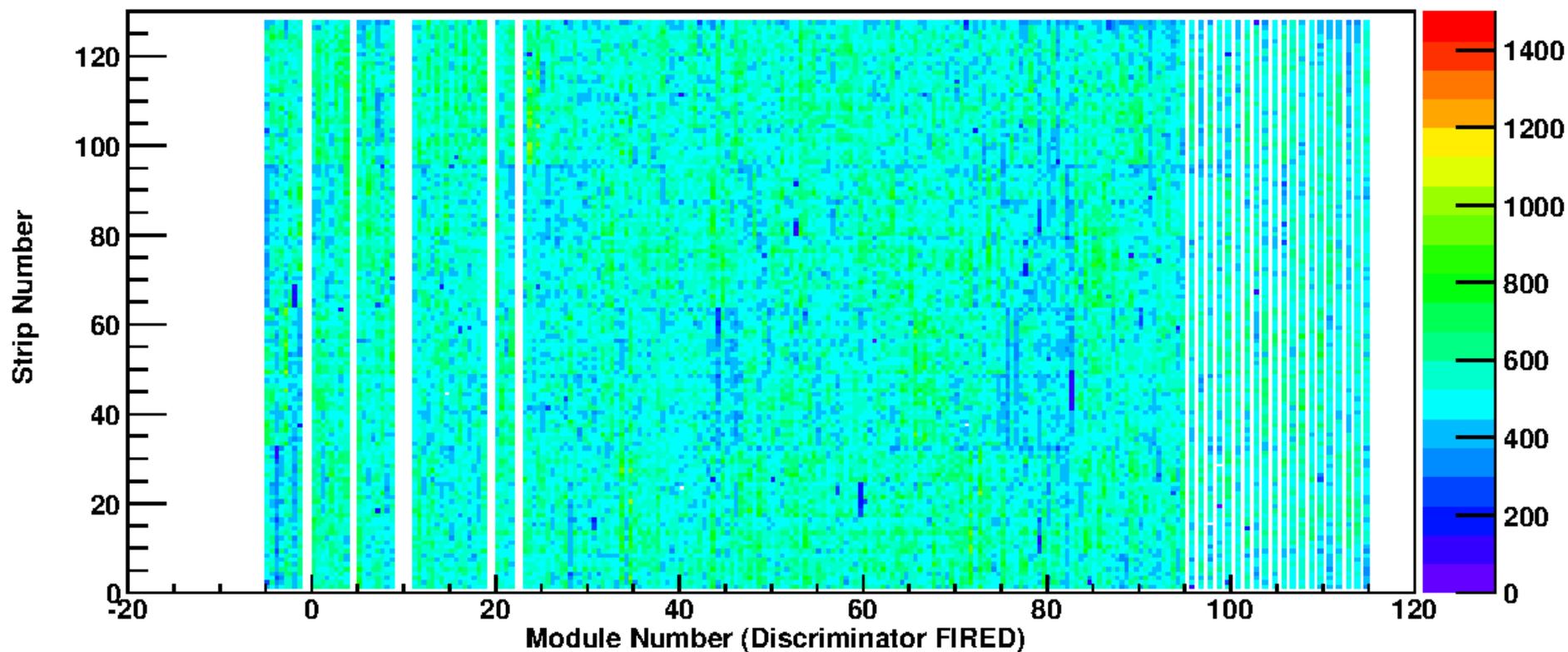
- For the pulse height , when the discriminator fires we expect the plots to look similar.



Pulse Height Map, Horn Off



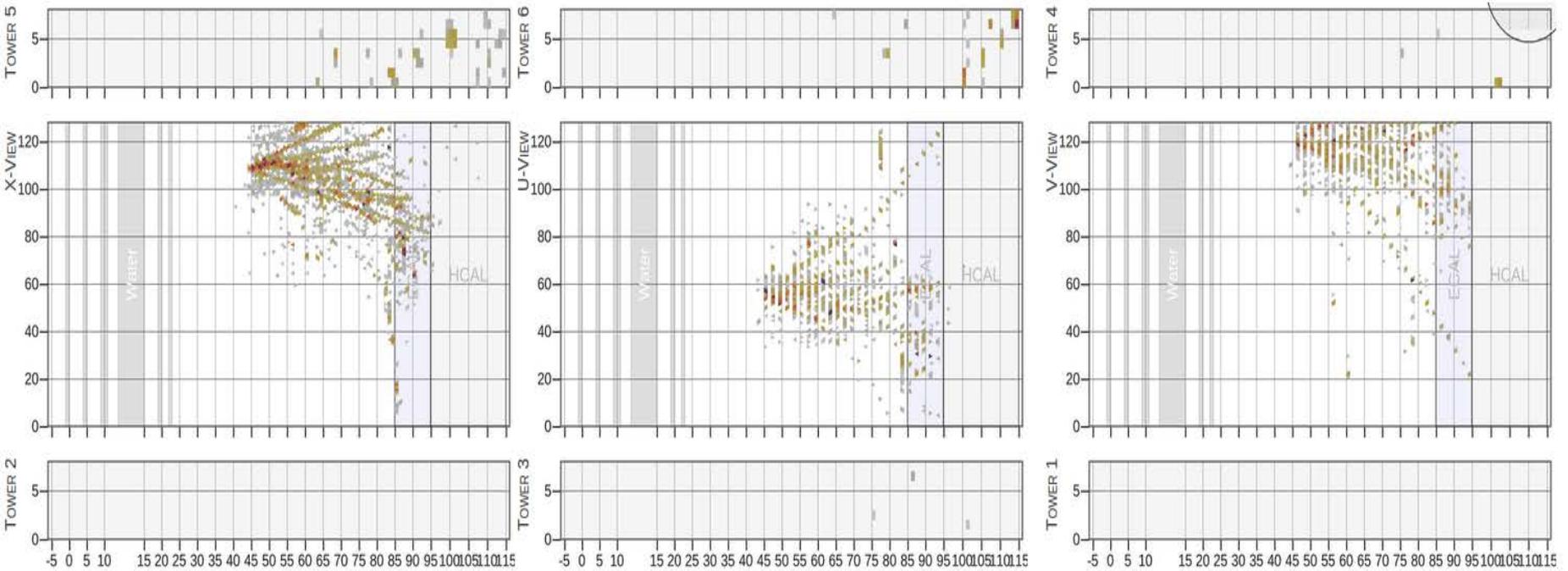
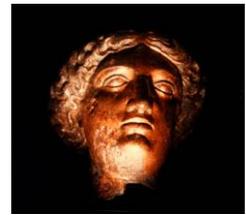
Numib AvgQhi for Strip (y) vs Module (x)



- Looks identical to the horn on plot.



Event Display



X View

V View

U View

CC Tracker Event



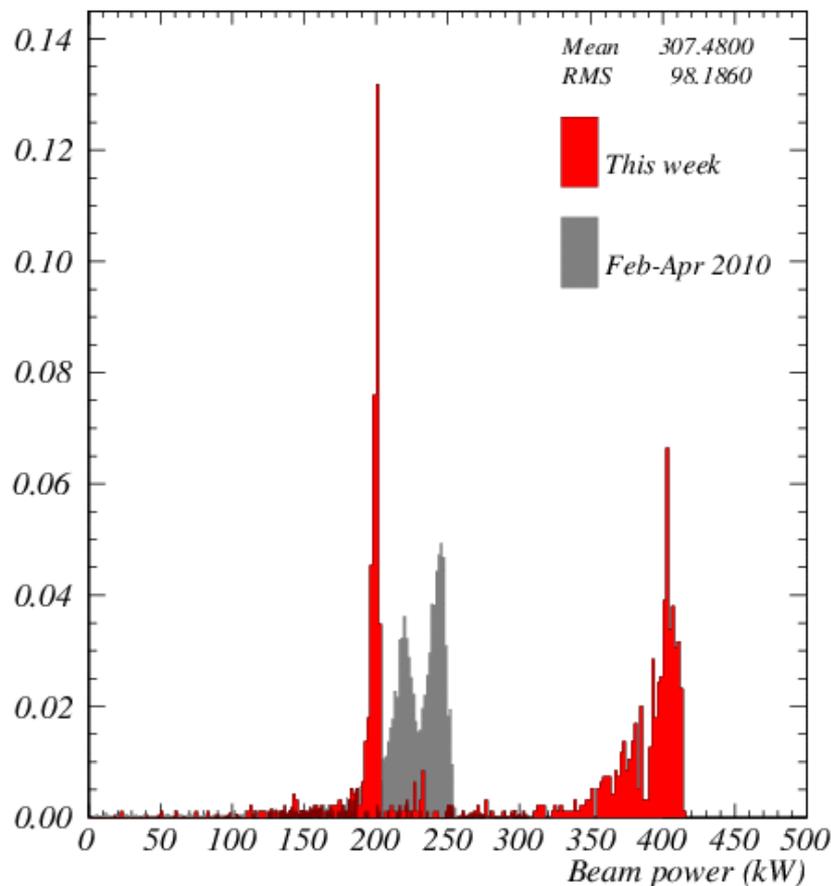
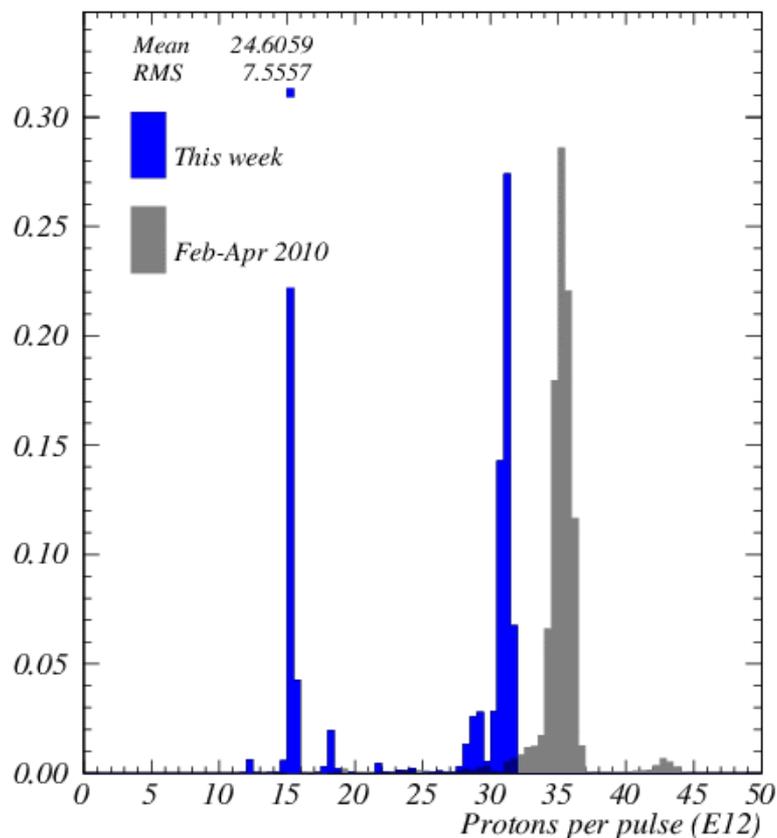
NuMI Beam Plots

Jun 22 - 28, 2015



Week ending 00:00 Monday 29 June 2015

Week ending 00:00 Monday 29 June 2015

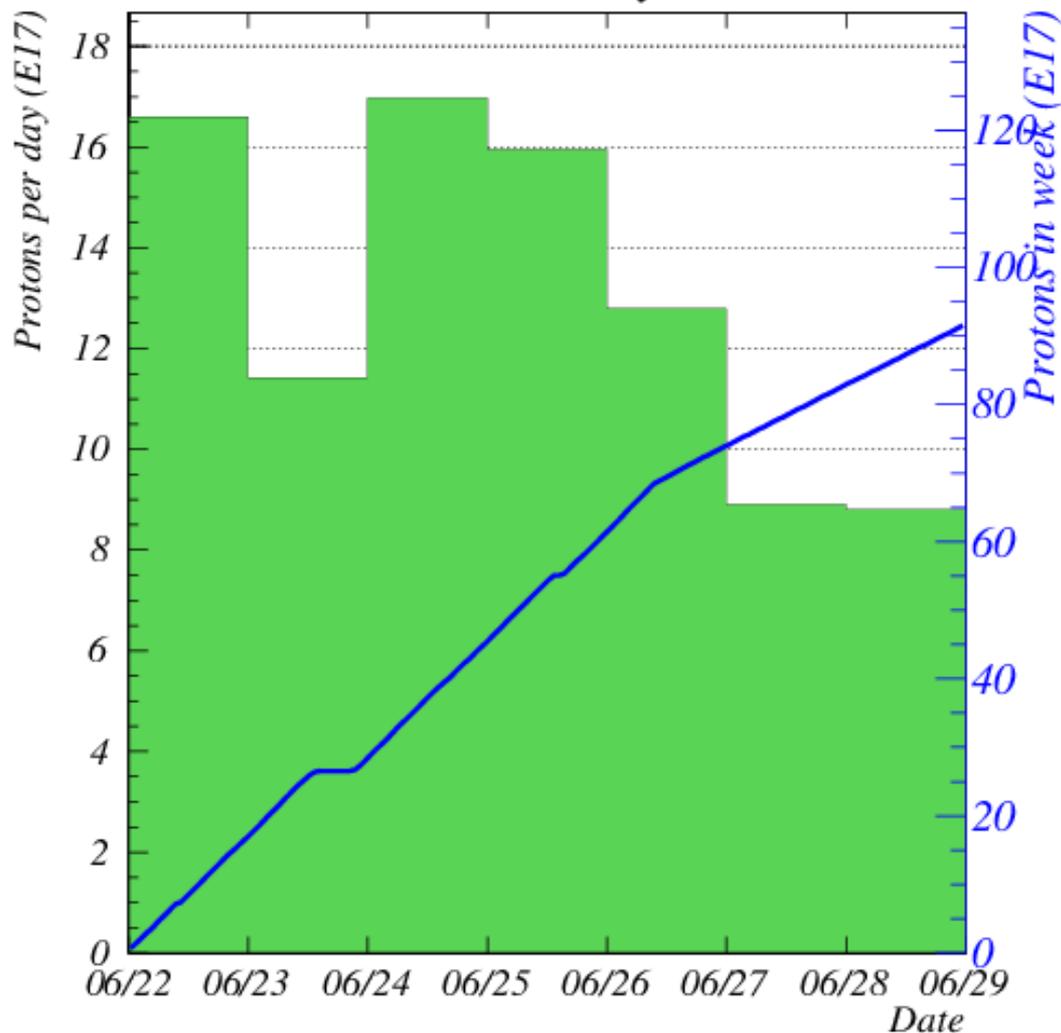




Protons for the Week



Week to 00:00 Monday 29 June 2015



Horn off data
 0.92×10^{19} POT
Jun 1 22-28, 2015

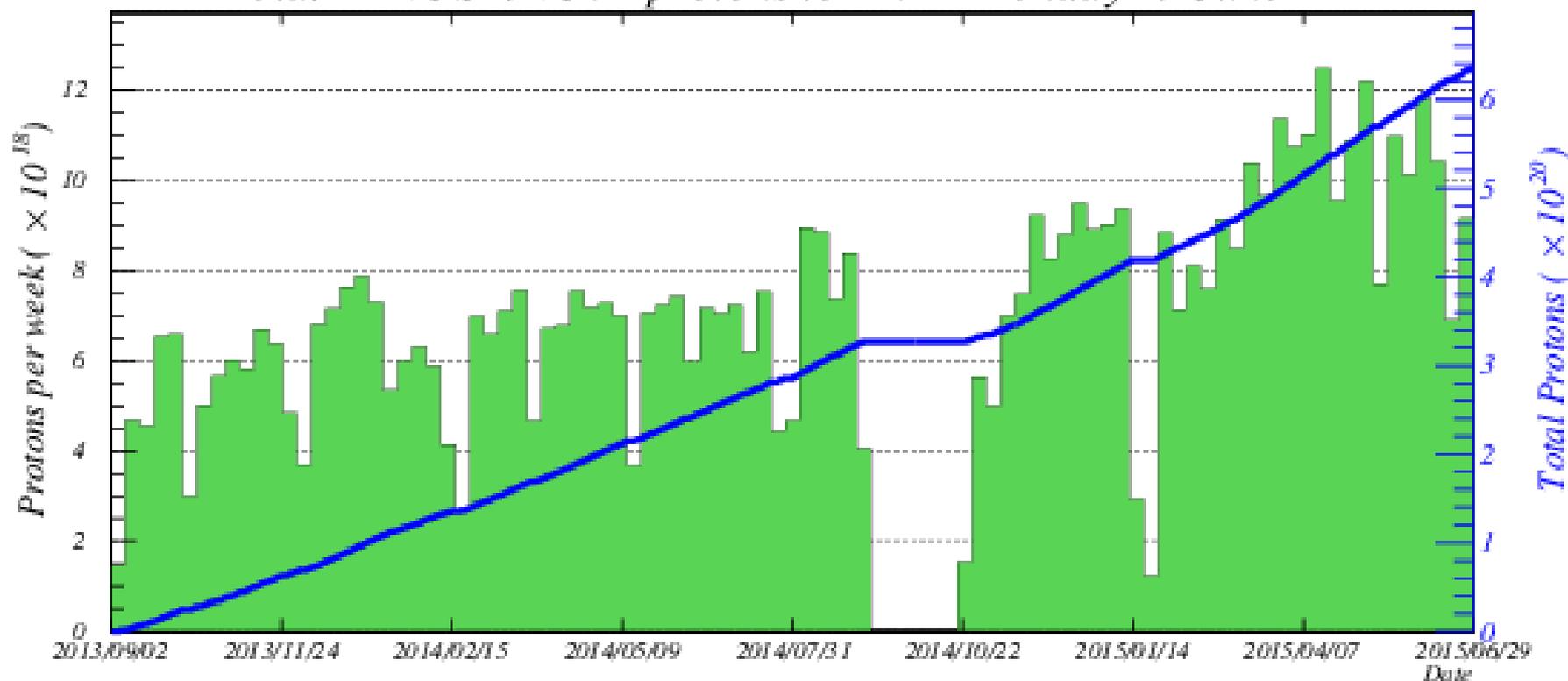
Total horn off data
 1.76×10^{19} POT
Jun 13(~22:00)-28



Protons for ME Run



Total MINOS+NOvA protons to 00:00 Monday 29 June 2015



63.45 $\times 10^{19}$ POT - Sep 6, 2013 at 15:00 – Jun 28, 2015