

# The MINERvA Operations Report

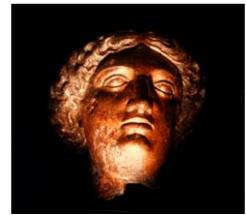
## All Experimenters Meeting

Howard Budd, University of Rochester

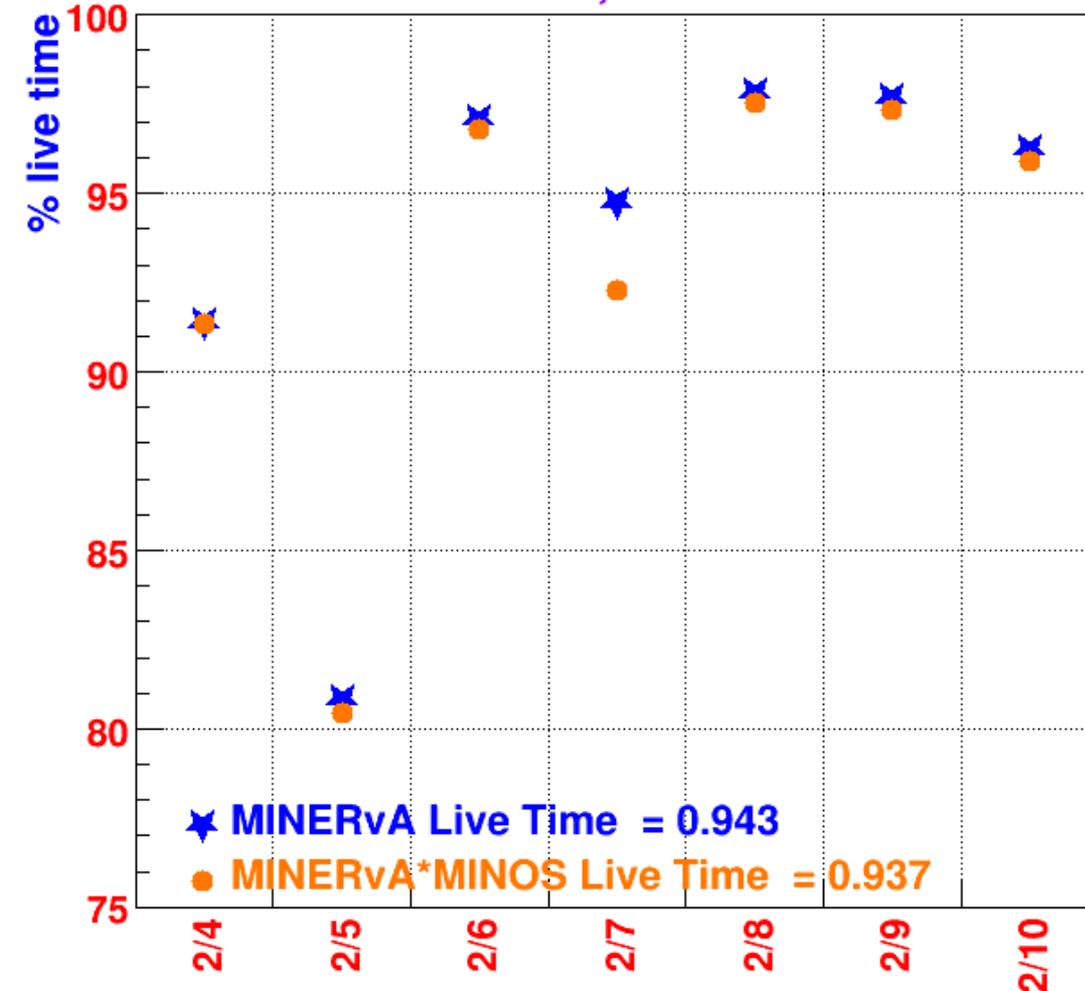
Feb 15, 2016



# $\nu$ Data



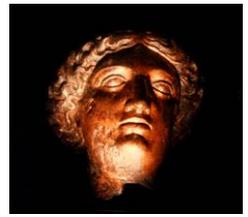
Feb 4 to Feb 10,  $1.36 \times 10^{19}$  POT



- Live Time – Feb 4-10 , 2016
- $1.36 \times 10^{19}$  POT
- MINERvA 94.3%
- MINERvA\*MINOS 93.7%



# v Data



- Feb 4 – 91.4% live
  - Errors on chain 0-2-2 ( Crate 0, CROCE 2, readout cable connector number in CROCE 2) , stopped the DAQ. Clearing the error was fairly easy. This chain has been giving errors since we got the DAQ to run after the power outage.



# v Data



- Feb 5 - 80.8% live
  - During the 3 day shutdown on Feb 2 to 4, after replaced the FEBs on chain 1-6-0, DAQ errors on that chain did not reappeared. So, we decided to replace the CROCE on 0-2-2. We used one of the 20 new CROCEs which had been built and tested by the Paul Rubinov's group in PPD.
  - The CROCE was replaced and we got RAM2 errors on the data. The unpacking gives up on the subrun when it hits a RAM2 error. The RAM2 error does not stop data taking and is not what we call a "DAQ" error. We put the old CROCE back in. We have not gotten any data or DAQ errors on this chain since then.
    - We are investigating why the new CROCE failed.
  - In addition, we got DAQ errors on another chain 0-6-2 ( different crate). This error was In reading the FEBs when starting the run. The DAQ was fairly easily to restart after this error.



## v Data



- Feb 7 – 94.7% live
  - we had two DAQ errors with chains in different crates.
- Feb 10 – 96.2%
  - One DAQ error on a chain & another with no chain specified
- We have been getting these DAQ errors 1-2 times a day. They are usually from the DAQ reading or writing to the FEBs when the run or subrun is starting. They are not on specific chains. They can be in either crate. These errors appeared after the power outage. These errors reduce our live time 1-2%. The original chains which were giving a lot of errors after the outage , 1-6-0 & 0-2-2, are no longer giving errors.



# Water Target



- We will be filling the water target on Feb 22 and the filling will take most of the day
  - We can take data while it is being filled.
- It was filled during the LE Run.
- Filled by John Voirin's Group.



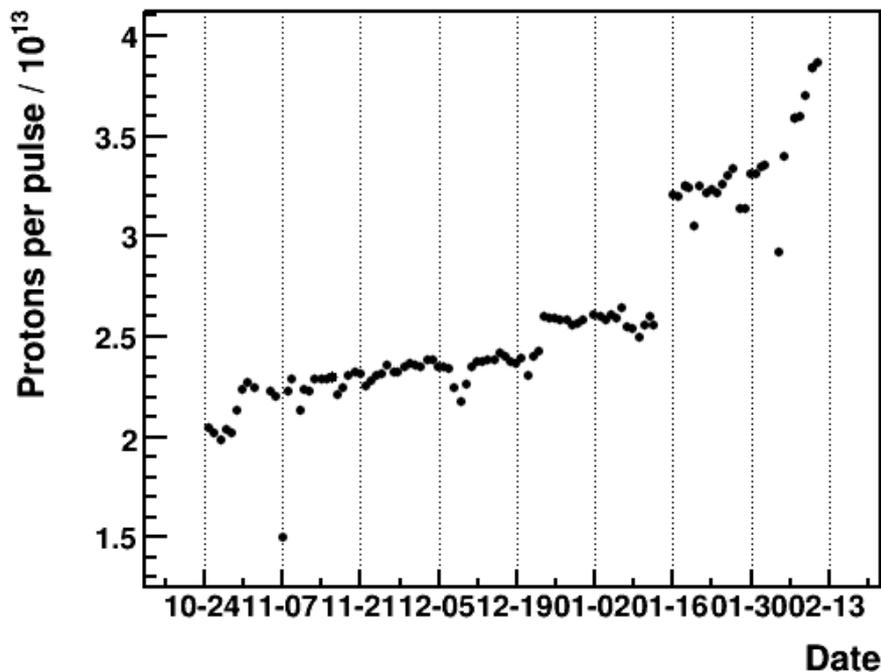
# Water Target



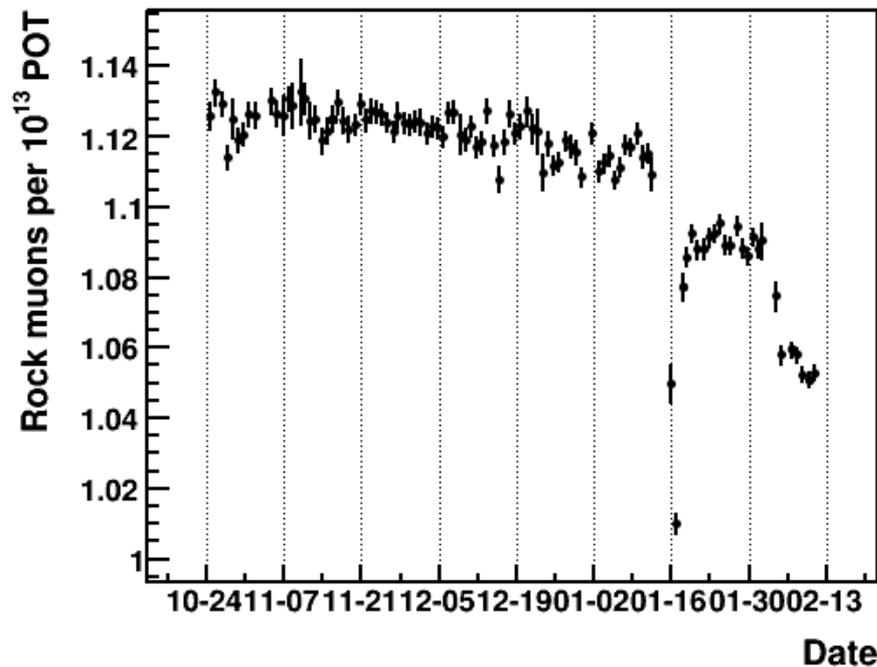
- We will be measuring the gap between the kevlar window and the scintillator planes.
- We will measure any movement of the scintillator plane. We will use a instrument designed by Jim Kilmer, MED in PPD.
  - We will be getting help from Pete Simon's group in PPD in doing these measurements



# Rock Muons/POT



POT/Pulse

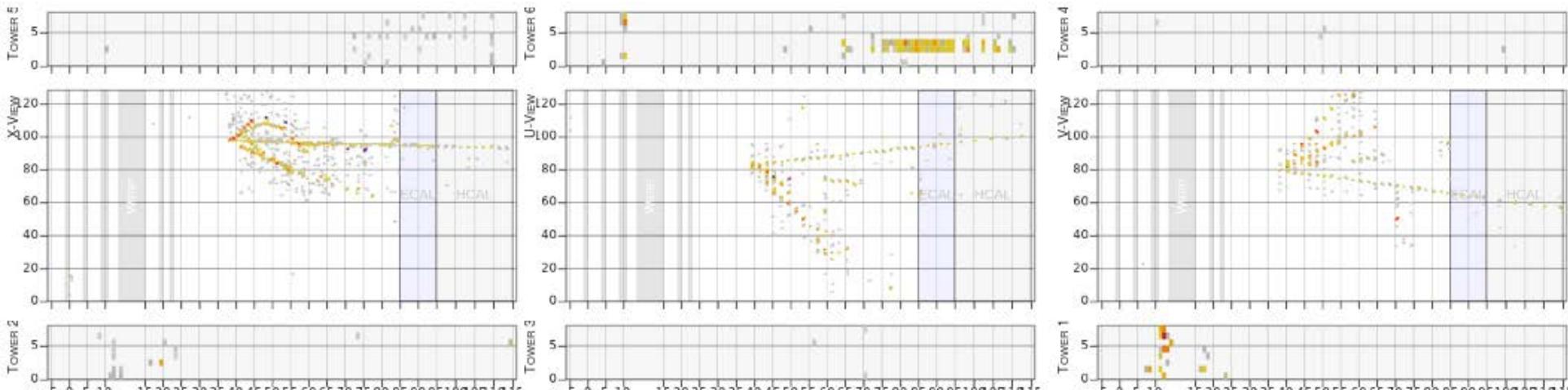
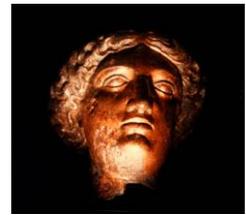


Rock Muons/POT

- The higher proton power from 4+6 slipstacking beam is causing a decrease in rock muon tracking efficiency



# Event Display



X View

V View

U View

Tracker CC Event

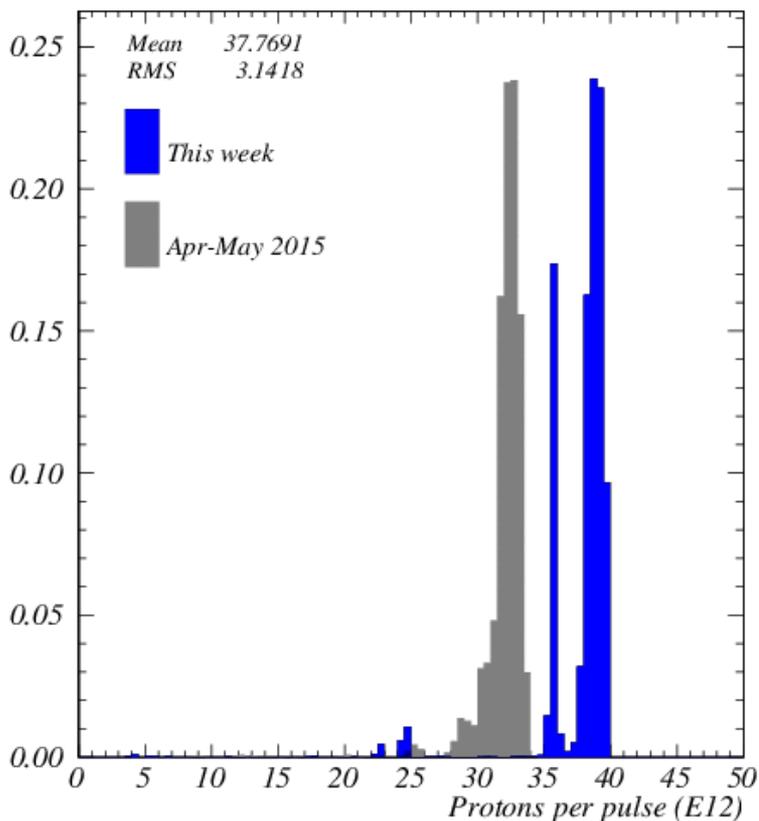


# NuMI Beam Plots

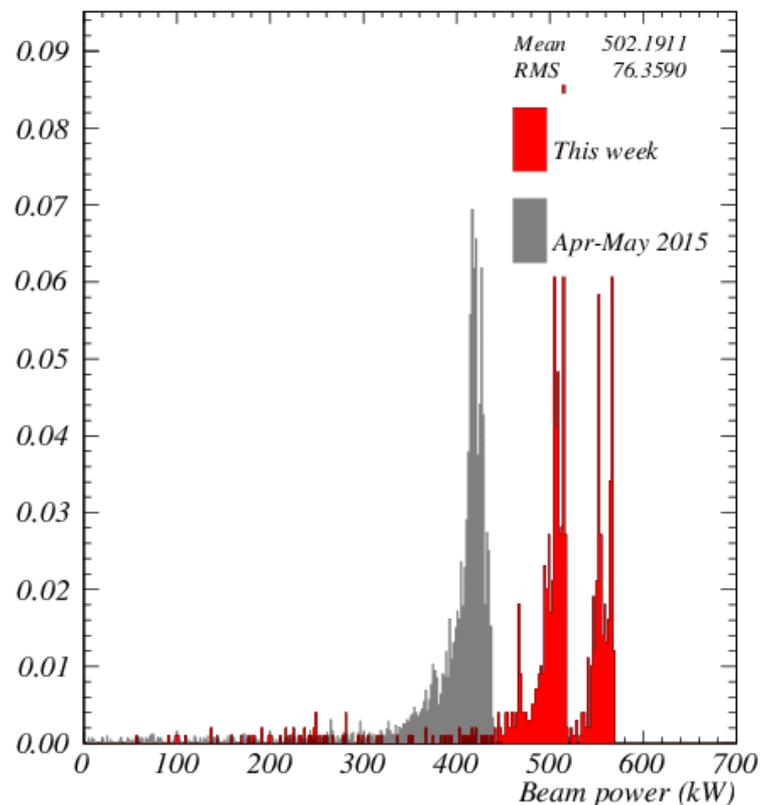
## Feb 8-14 , 2016



Week ending 00:00 Monday 15 February 2016



Week ending 00:00 Monday 15 February 2016



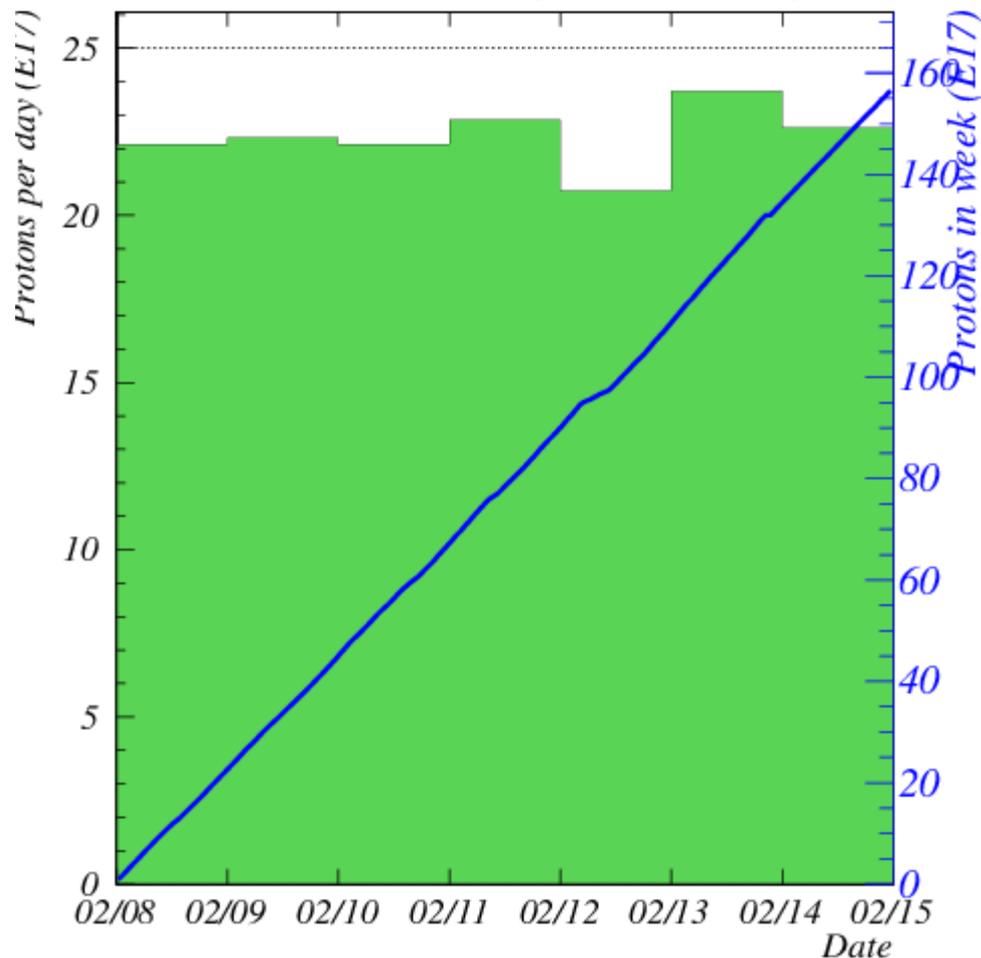
- Phil made some changes: increased beam power axis to 700 MW & the grey average is now the best 2015 running.



# Protons for the Week

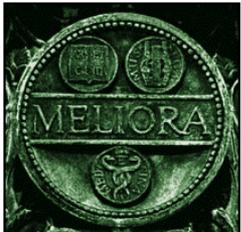


Week to 00:00 Monday 15 February 2016



$1.56 \times 10^{19}$  POT  
Feb 8-14, 2016

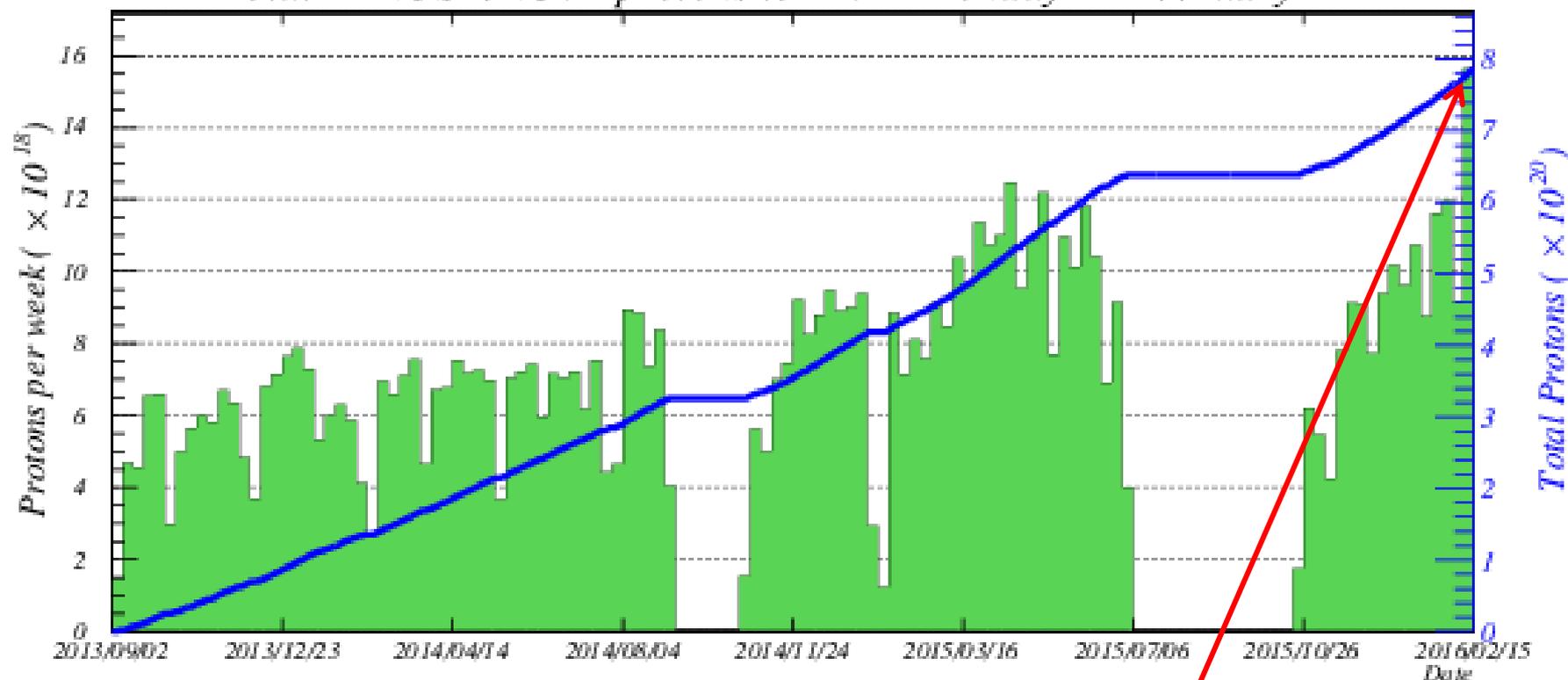
As can be seen from the next page, this is a NuMI weekly record by far



# Protons for ME Run



Total MINOS+NOvA protons to 00:00 Monday 15 February 2016



78.70 $\times 10^{19}$  POT - Sep 6, 2013 – Feb 14, 2016  
Congratulations to AD for the weekly record