

The MINERvA Operations Report

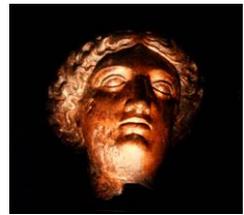
All Experimenters Meeting

Howard Budd, University of Rochester

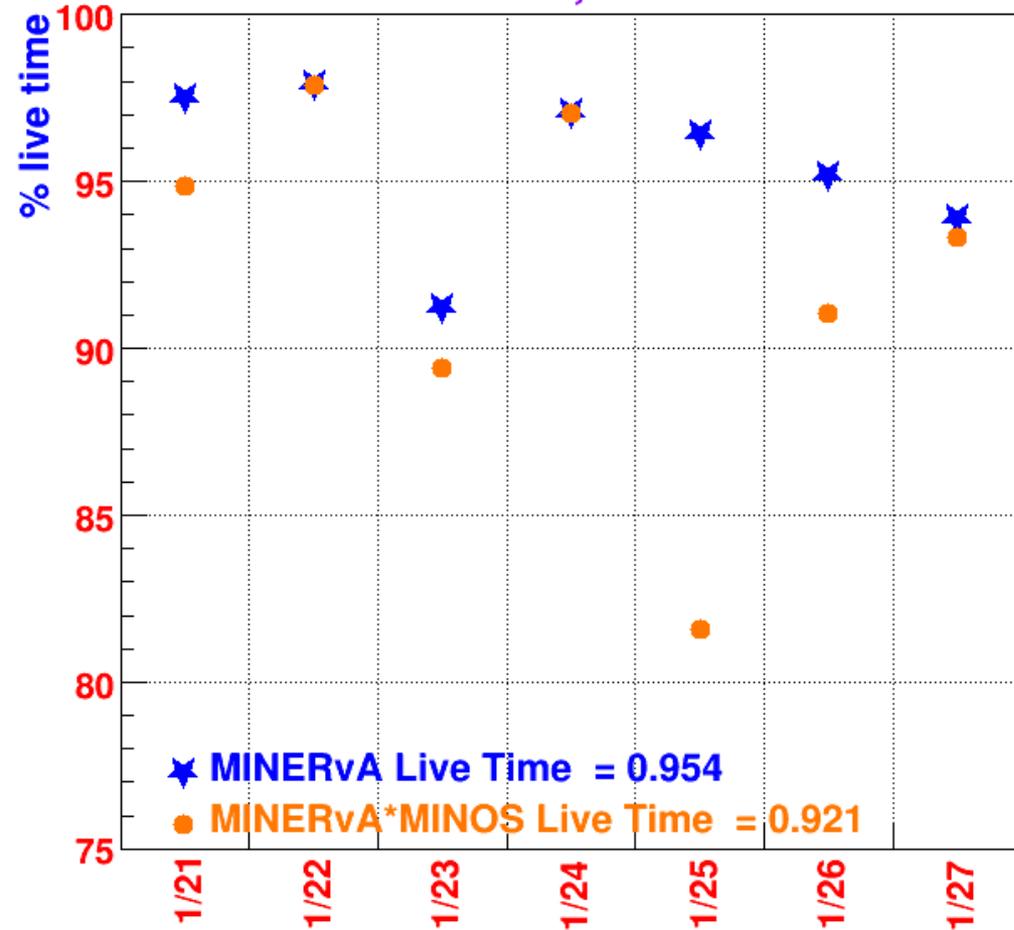
Feb 1, 2016



ν Data



Jan 21 to Jan 27, 1.15×10^{19} POT



- Live Time – Jan 21-27, 2016
- 1.15×10^{19} POT
- MINERvA 95.4%
- MINERvA*MINOS 92.1%



v Data



- As stated last week, we are still getting DAQ errors 1-2 times a day. The errors are communication errors in the daisy chains which reads out the FEBs. These errors eventually cause the DAQ to stop or skip subruns. They have continued since we have recovered from the power outage. The DAQ can be restarted fairly easily.
 - A chain reads out 5-10 FEBs. There are 59 chains.
 - Virtually all the DAQ errors occur on 2 chains. Most of the rest of the errors occur on one other chain.
 - These errors cause a live time loss of a couple %.
 - Jan 23 – 91.2%
 - Jan 25 – 96.4%
 - Jan 26 – 95.2%
 - Jan 27 – 93.8%
- The data errors which caused the data during the recovery from the shutdown to be bad have not reappeared.



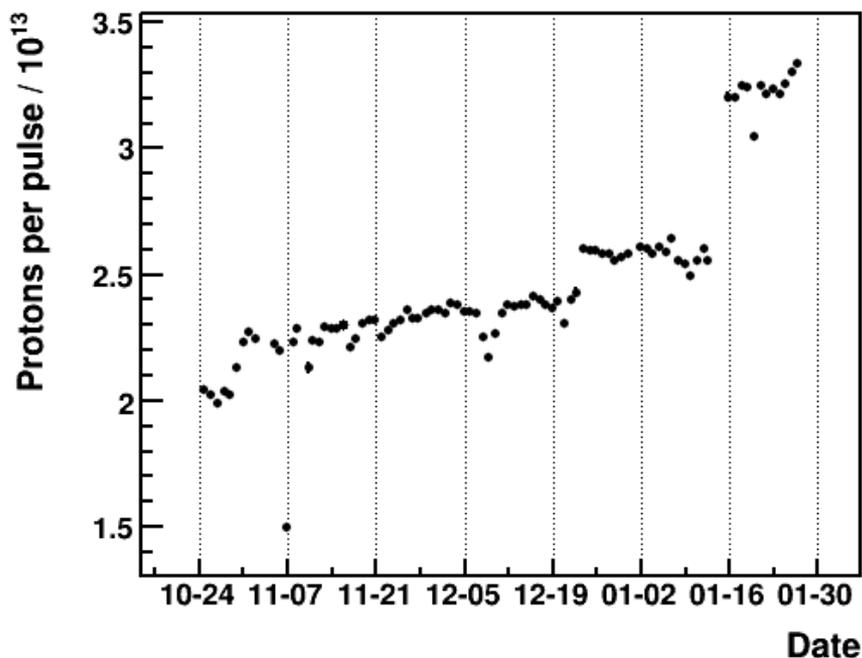
Plans for This Week's Downtime



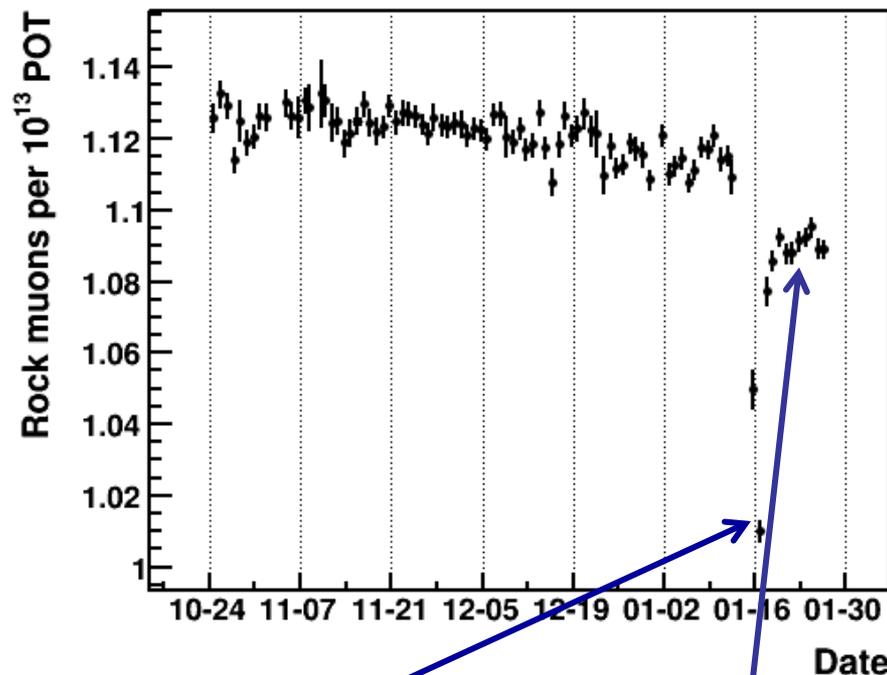
- Replace a PMT which has some high voltage (HV) variation. The Cockcroft-Walton (CW) frequency for this tube is high. This means the CW is working hard to keep the tube on the correct HV. There is probably some small current draw somewhere in the PMT box.
- FEB with a dead channel.
- Replace FEB for PMT box with occasional HV spikes. Although the PMT box is usually the problem, first we usually replace the FEB.
- After the PMT box checkout, we will address the DAQ errors previously described.



Rock Muons/POT



POT/Pulse

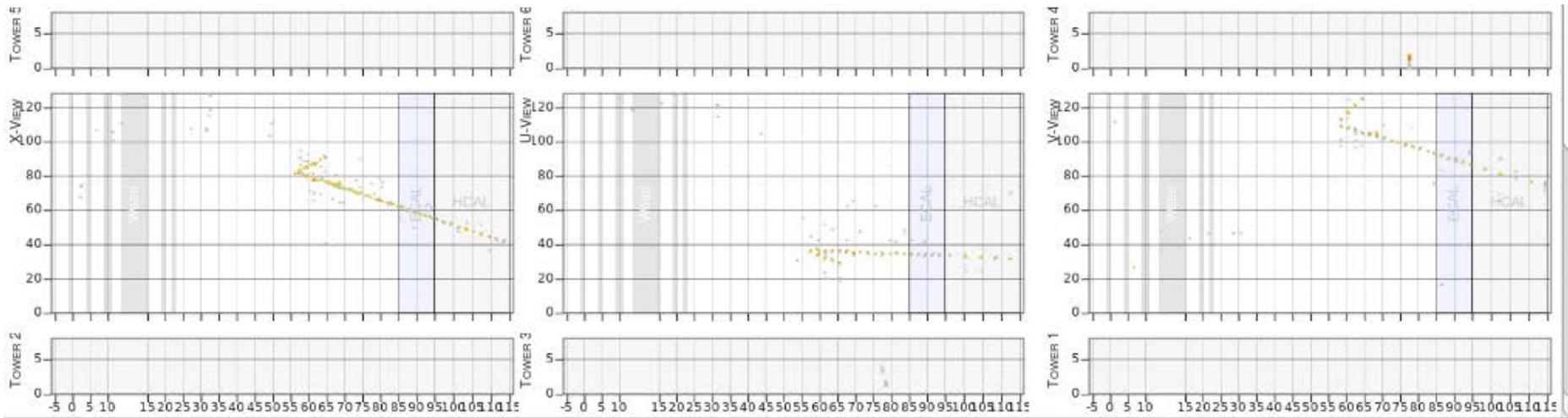


Rock Muons/POT

- The ~10% loss is caused by the bad ADC data caused by the “dummy bit” error. As CROC-Es got replaced the error rate went down.
- The higher proton power from 4+6 slipstacking beam causes ~ 2% decrease in rock muon tracking efficiency



Event Display



X View

V View

U View

Tracker CCQE



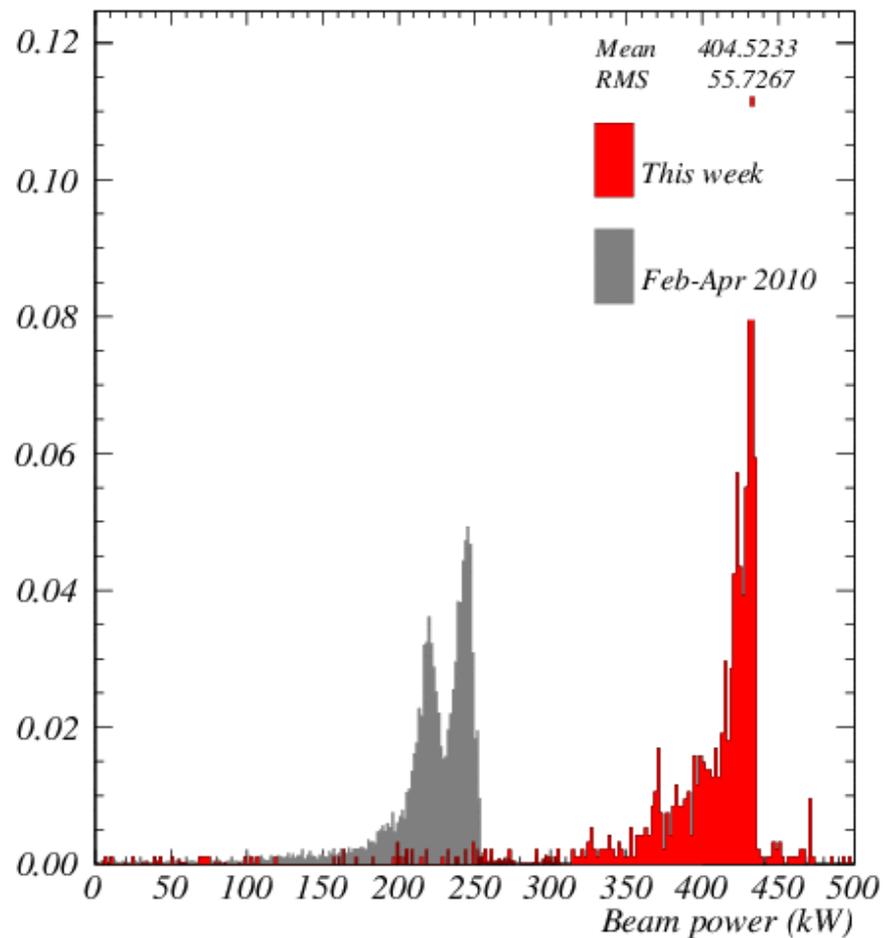
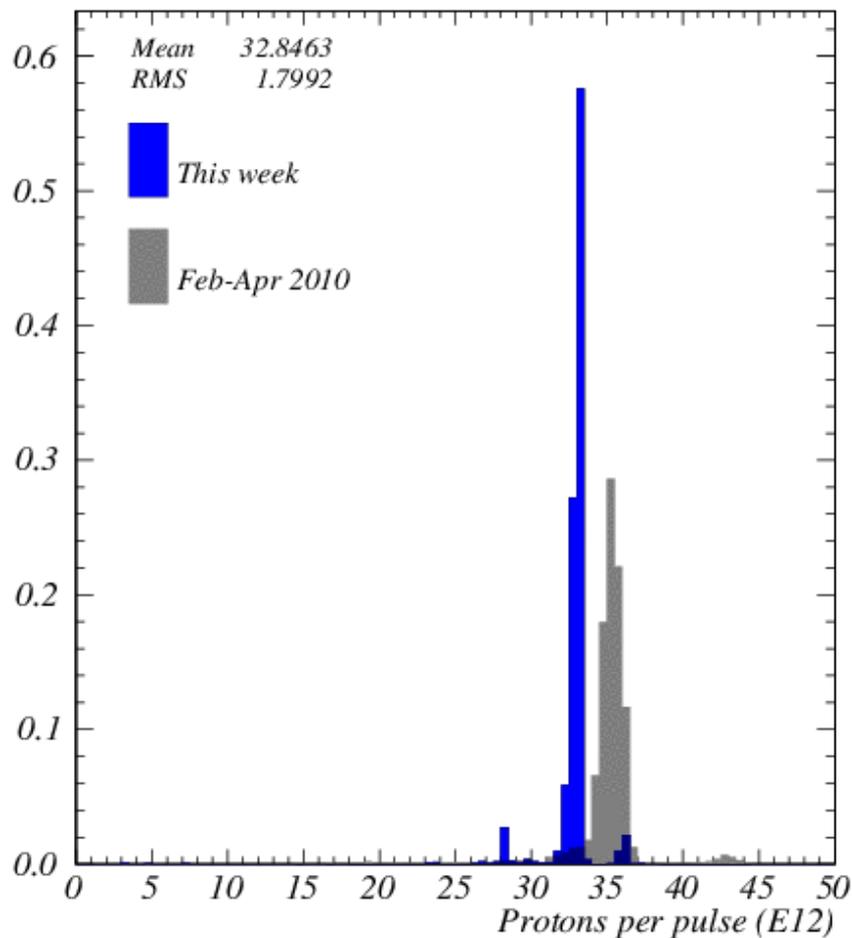
NuMI Beam Plots

Jan 25-31, 2016



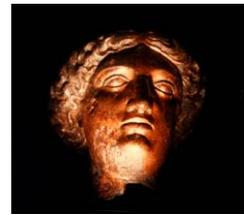
Week ending 00:00 Monday 01 February 2016

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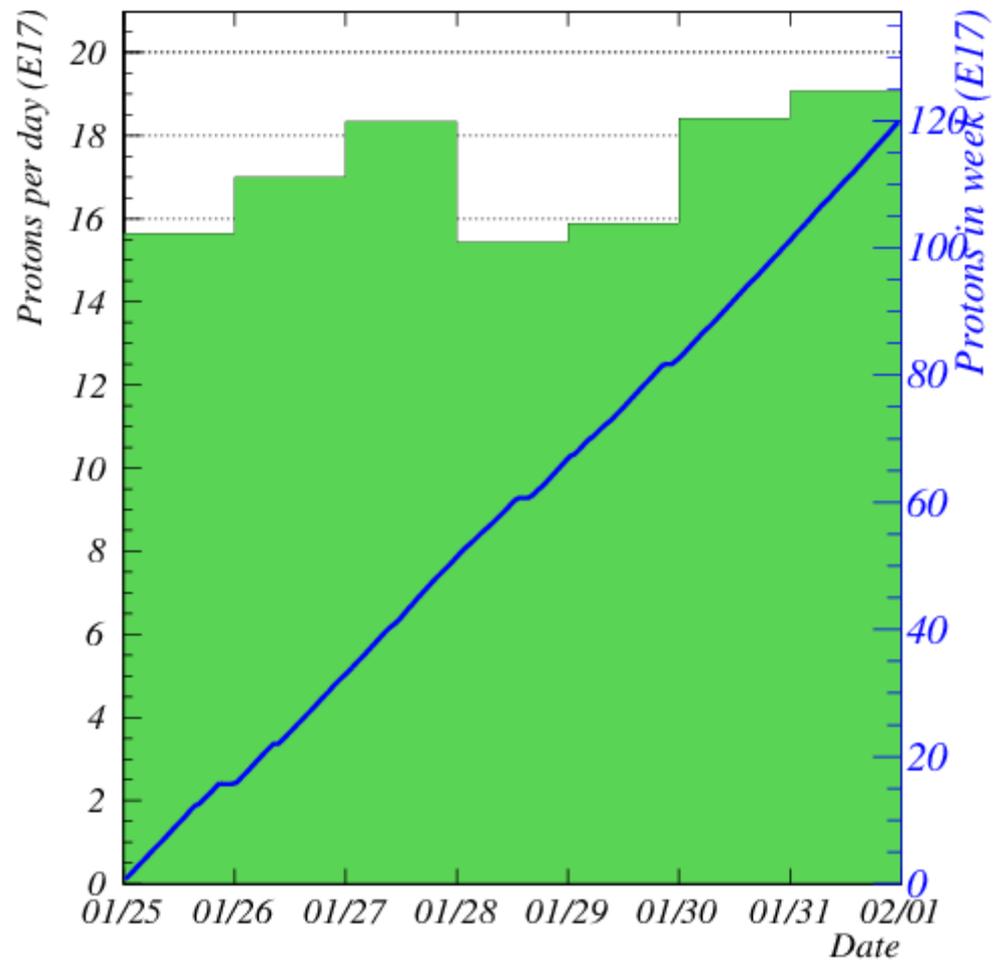




Protons for the Week



Week to 00:00 Monday 01 February 2016



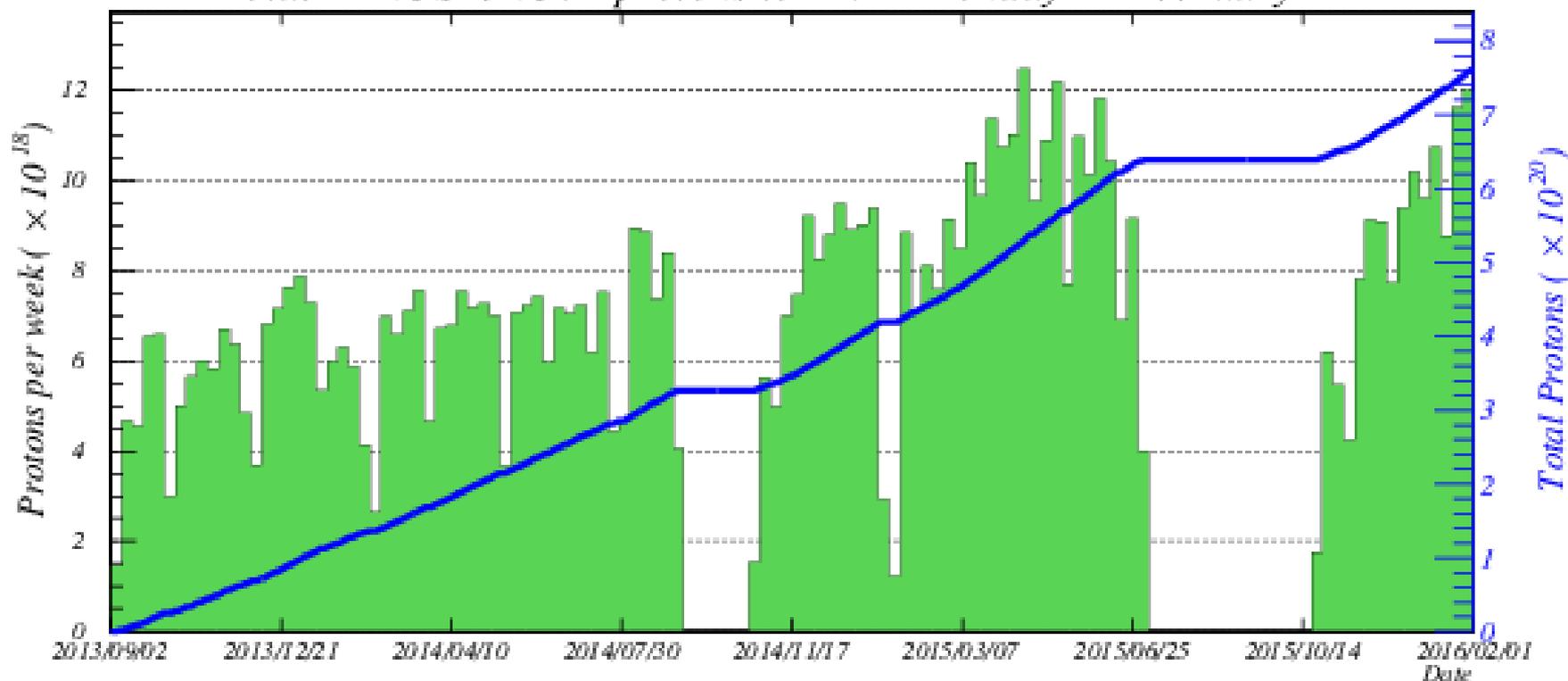
1.20×10^{19} POT
Jan 25-31, 2016



Protons for ME Run



Total MINOS+/NOvA protons to 00:00 Monday 01 February 2016



76.22×10^{19} POT - Sep 6, 2013 – Jan 31, 2016