



# MINOS+ Status Report



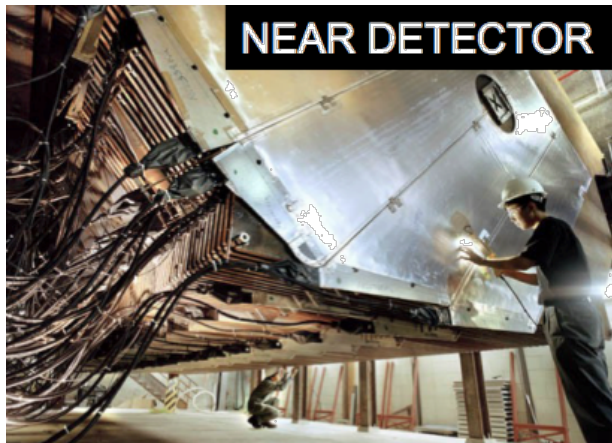
Donatella Torretta & Adam  
Schreckenberger  
All Experimenters' Meeting  
June 27, 2016



# Near Detector



## DAQ



- One crash recovered within few minutes

## Electronics/Detector

- One very hot channel in the spectrometer: we'll replace the Minder on Wednesday
- Intermittent LI issues:
  - Data Quality flags some data as bad (hence lower LiveTimes )
  - Investigation will take place during summer shutdown
  - **LI HAS BEEN TURNED OFF** on Saturday morning
  - Can be re-enable on demand any time



# Far Detector



## DAQ

- No issues: ran well the whole week

## Electronics/Detector

- No detector issues
- Running with only one Chiller
- Taking CI special runs during beam downtimes



# MINOS+ Status



## Near Detector

## Far Detector

Start Date/Time	End Date/Time	POT Fraction	Live Time Fraction	POT Fraction	Live Time Fraction
3/14/2016 00:00:00	3/28/2016 00:00:00	99.3%	96.5%	99.8%	99.5%
3/21/2016 00:00:00	3/28/2016 00:00:00	99.7%	99.7%	99.8%	99.8%
3/28/2016 00:00:00	4/4/2016 00:00:00	98.5%	96.5%	98.3%	98.2%
4/4/2016 00:00:00	4/11/2016 00:00:00	92.4%(**)	91.9%(**)	99.9%	97.9%
4/11/2016 00:00:00	4/18/2016 00:00:00	58%(**)	58%(**)	99.8%	99.8%
4/18/2016 00:00:00	4/25/2016 00:00:00	99.6%	98.3%	99.4%	99.5%
4/25/2016 00:00:00	05/02/2016 00:00:00	99.6%	99.7%	98%	98%
5/2/2016 00:00:00	5/9/2016 00:00:00	99.5%	99.6%	94.0%	93.8%
5/9/2016 00:00:00	5/16/2016 00:00:00	97.0%	94.3%	99.9%	99.5%
5/16/2016 00:00:00	5/23/2016 00:00:00	94.4%	94.6%	99.9%	99.9%
5/23/2016 00:00:00	5/30/2016 00:00:00	99.5%	99%	99.9%	99.5%
5/30/2016 00:00:00	6/6/2016 00:00:00	98.8%	99%	94% (&)	93.8%(&)
6/6/2016 00:00:00	6/13/2016 00:00:00	89.2%(**)	90.5%(**)	99.9%	99.5%
6/13/2016 00:00:00	6/20/2016 00:00:00	88.3%(**)	89%(**)	99.7%	99.7%
6/20/2016 00:00:00	6/27/2016 00:00:00	71%(**)	73%(**)	99.6%	99.4%

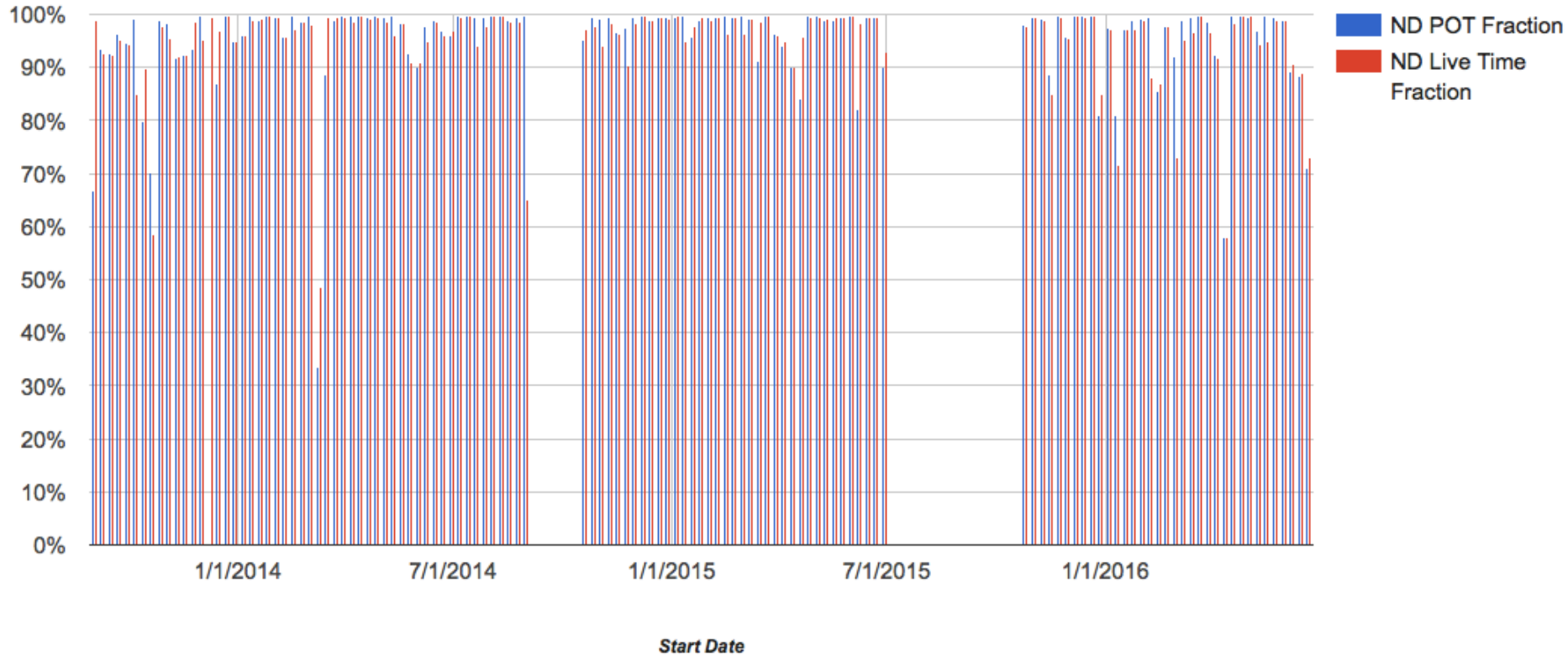
(\*\*) LI issues (&) Crate 0 off



# MINOS+ ND Status



ND POT fraction and Live Time Fraction





# MINOS+ FD Status



FD POT Fraction and Live Time Fraction

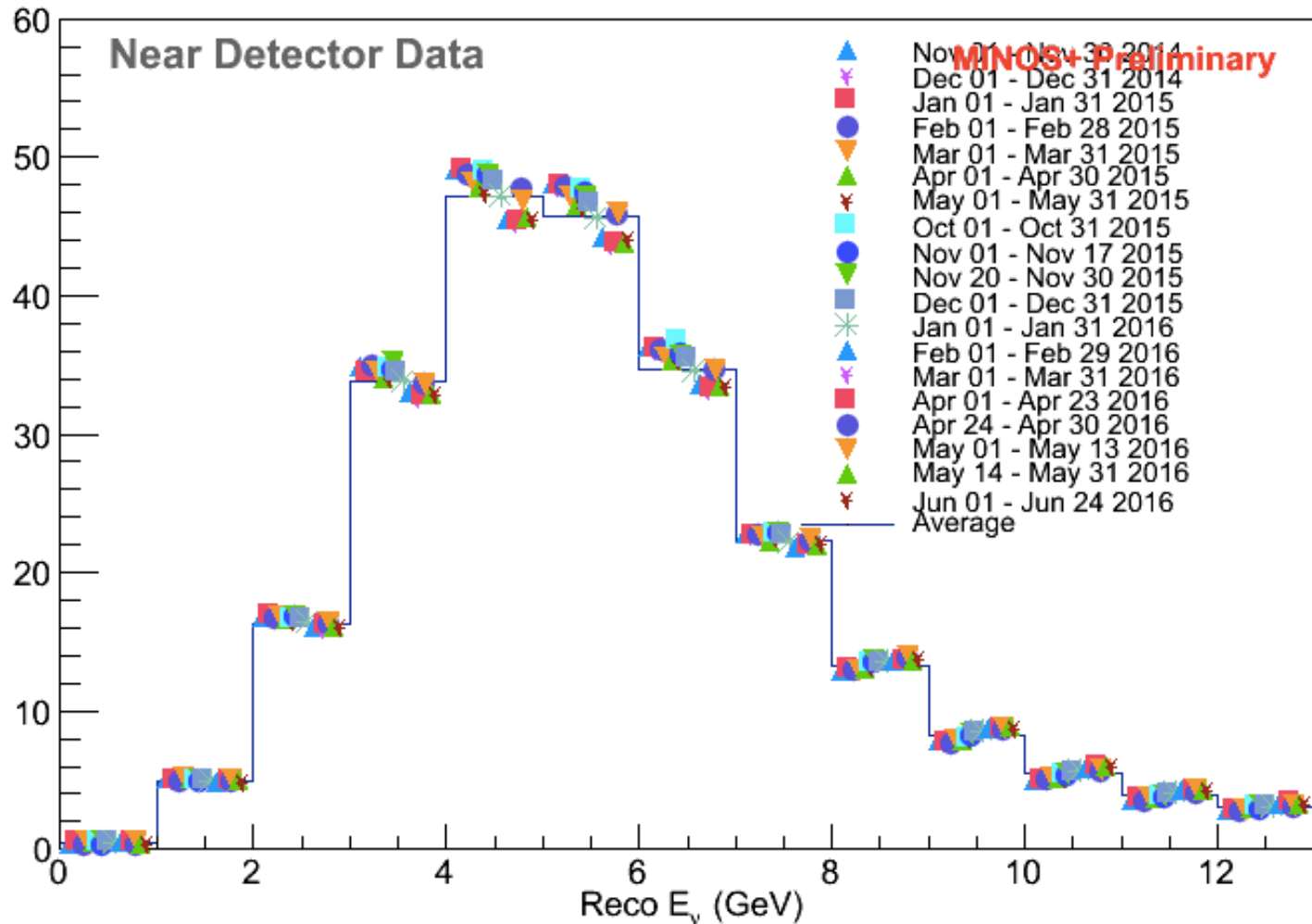




# Energy Spectrum



## Neutrino Energy Spectrum Stability (PQ and NQ)

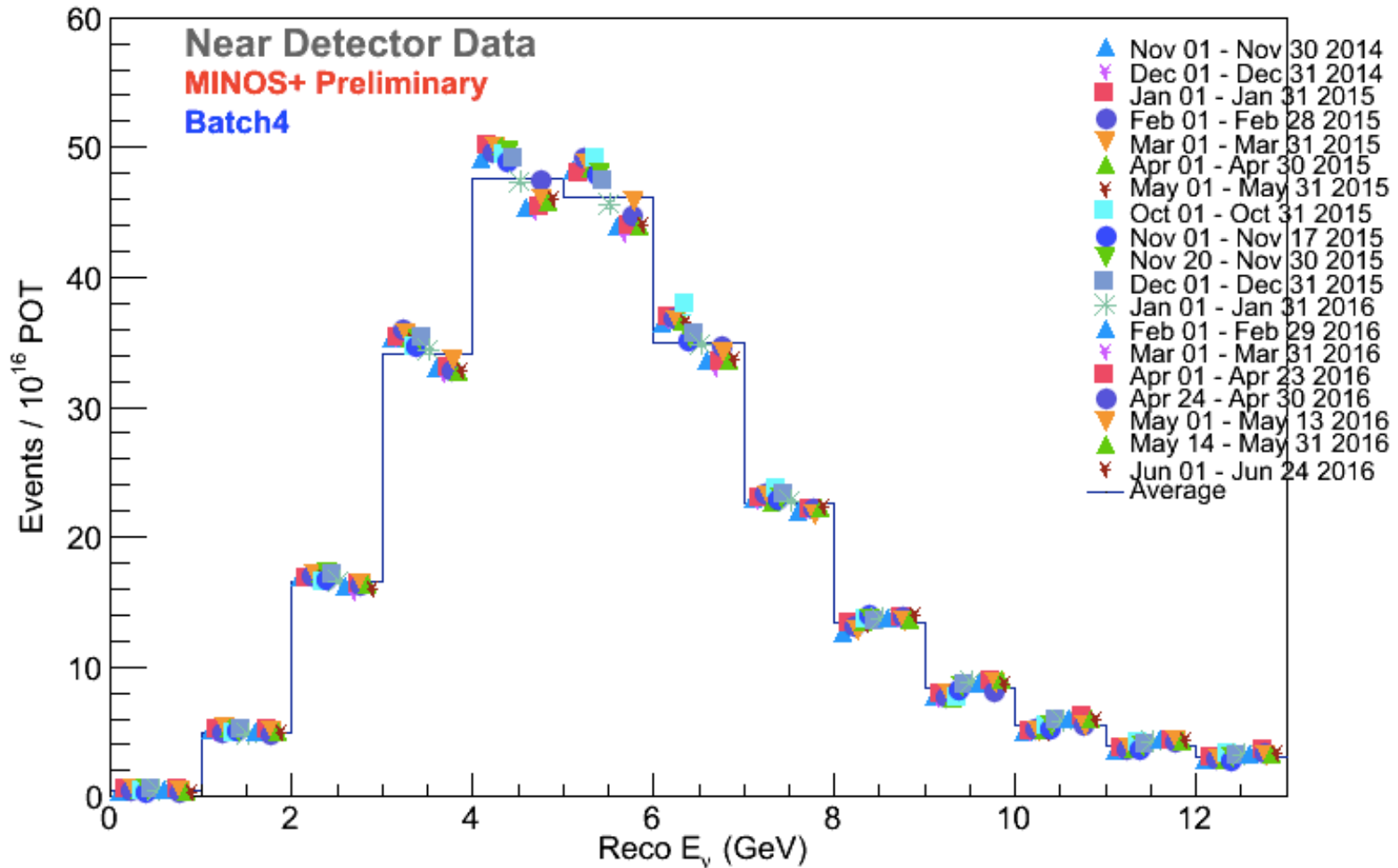




# Spectrum Stability (batch #4)



Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)

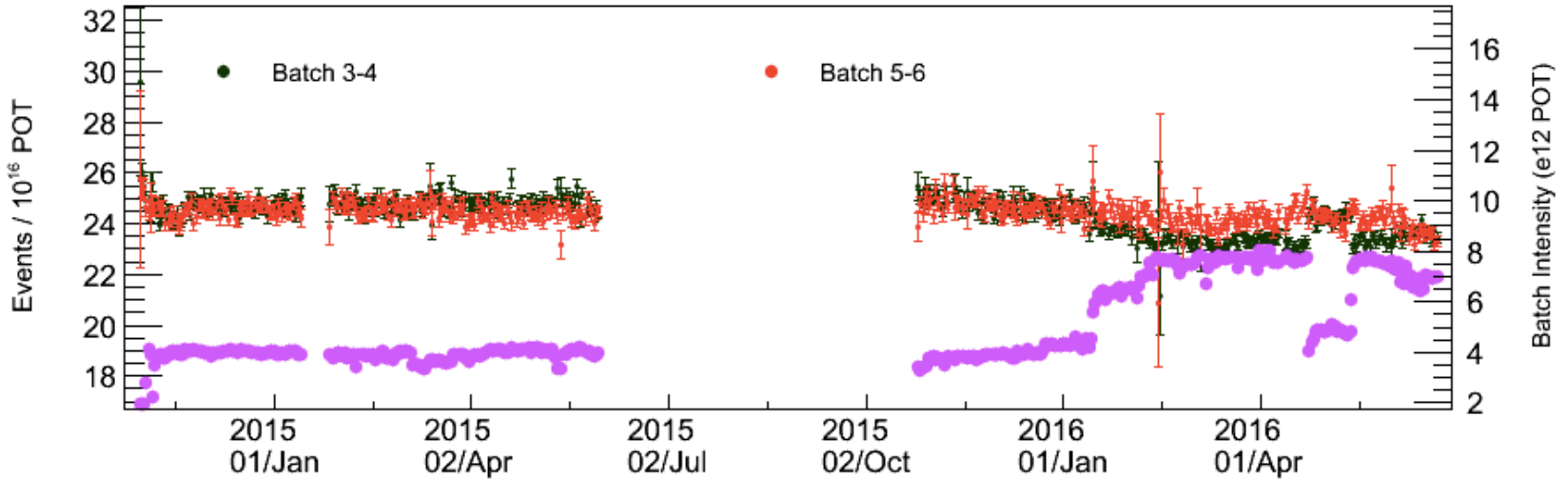




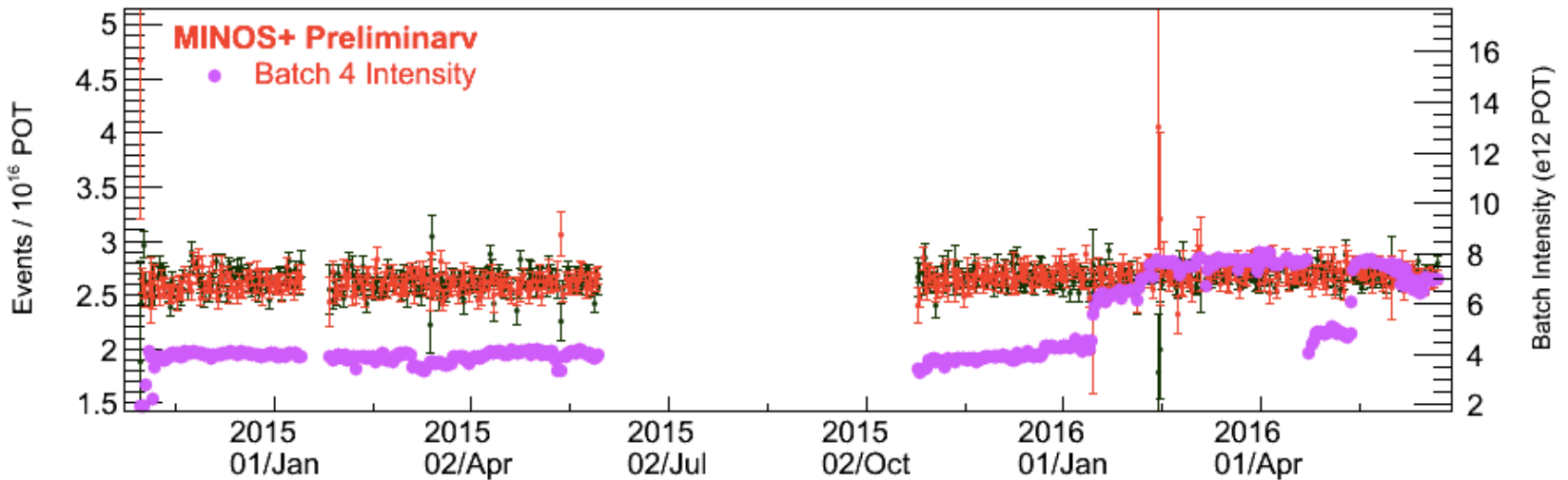


# Events/POT vs. Time

Neutrino Events Per POT v.s. Time ( $E_\nu < 14$  GeV)



Neutrino Events Per POT v.s. Time ( $E_\nu > 14$  GeV)

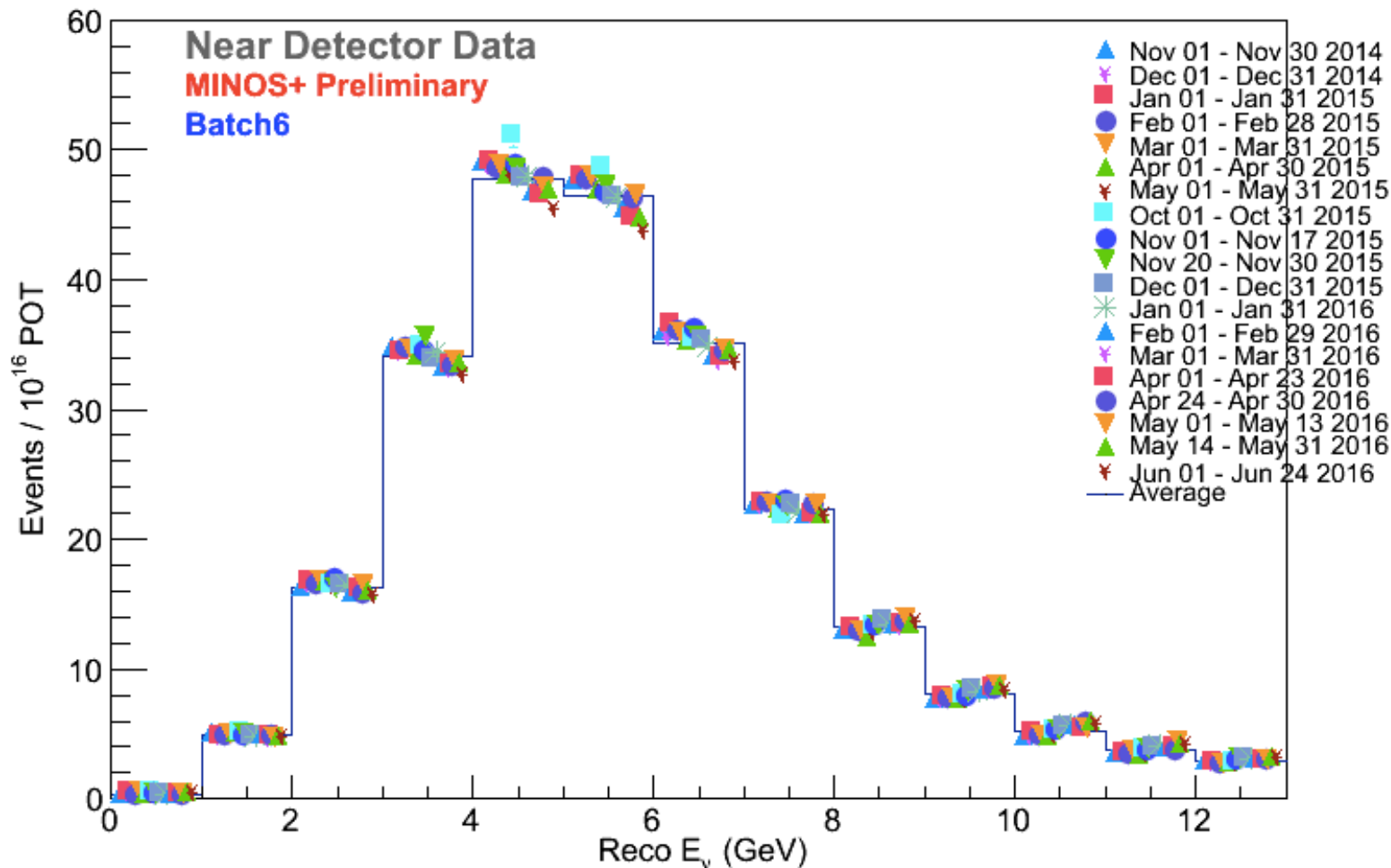




# Spectrum Stability (batch #6)

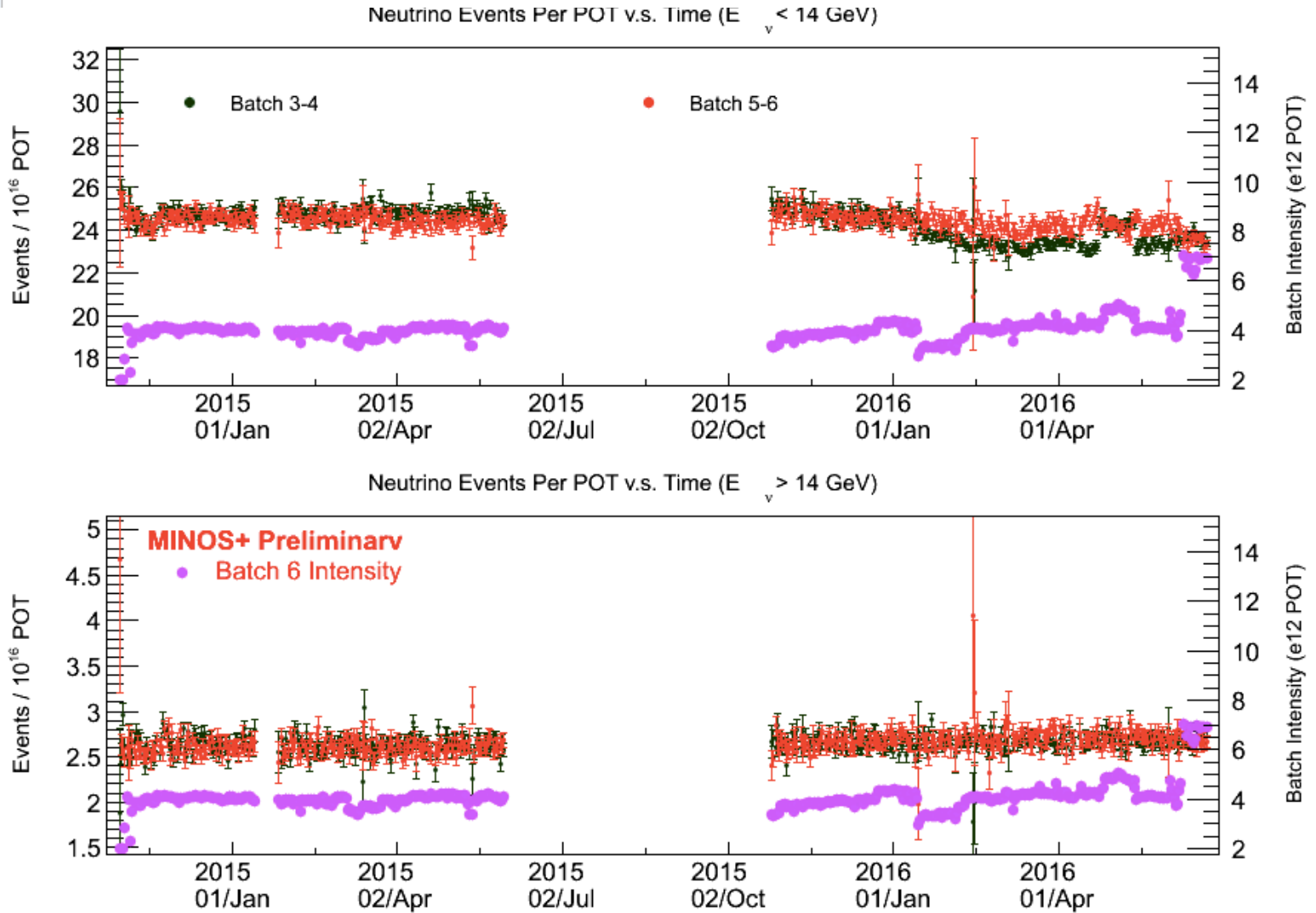


Neutrino Selected Batch Energy Spectrum Stability (PQ and NQ)





# Events/POT vs. Time





# Events/POT + Intensity



Spectrum by batches available at:

<http://minos.fnal.gov/DataQuality/BatchPage.php>



# MINOS+ end remarks



- Last MINOS+ RunCO AEM talk!!!
- 76 talks for me
- 38 talks for Adam
- Thanks to all who helped make MINOS/MINOS+ a great experiment
- Special thanks to AD for delivering  $\sim 2.6 \times 10^{21}$  POT !!!

## All NuMI protons

