NOvA Operations Update

Matt Judah (UPitt), Hongyue Duyang (USC)

Proton PMG Meeting April 2, 2020







Far Detector Operations



Major downtimes:

- DCM error on 3/3
- Power bump 3/6
- Blown fuse in power supply 3/11
- DAQ network issues caused by FTS overload 3/25 - 3/26

Total RHC POT recorded: 12.69E20

• Total FHC POT recorded: 16.30E20 (13.64E20 14kT-equivalent)

• FY20 POT: 2.602E20 recorded, 2.625E20 delivered



Near Detector Operations



Major downtimes:

- ND powered down during work at Fermilab 3/21-3/23
- Recovery on the 23 with a pedestal scan on the 24



Operations Highlights

- Running Conditions Since March 21:
 - ND and FD were left running to minimize hardware loss due to power cycling
 - Maintains uptime for non-beam related physics analyses and maintains supernova sensitivity
 - Shifters were given tools to take shifts from their laptop or home computer to monitor the detectors at regular intervals during their shifts
 - Experts have made additional email/text alarms to notify whenever the DAQ goes down or for any hardware issues.



Timing Peak for period 10



Period 10: Started on October 29, 2019 (after the summer shutdown)

Special online selection is used to largely not overlap with the physics sample

Neutrino Candidate



Computing Update



- Have almost finished the production campaign for Neutrino2020
- 1.2M jobs were run, 0.8M of which were production
- No major technical issues to report



Test Beam

- Operations suspended for the duration of lab closure.
 - Experiment is in a 'mothballed' safe state, with weekly walk-throughs to monitor all systems.
 - Only system running is the dry gas for the APDs
- Data on disk so far (Jan 7 Mar 20):
 - 5160 good particles (243 electrons, 2673 muons, pions, accidentals, 103 kaons, 2013 protons).
- AD/NOvA were making progress with beam studies towards an improved understanding of our beam.
 - New studies not possible during beam downtime, but lots of work ongoing to analyze data and further understand the beamline from survey and simulated data.

