



NOvA Operations Summary

January 2021

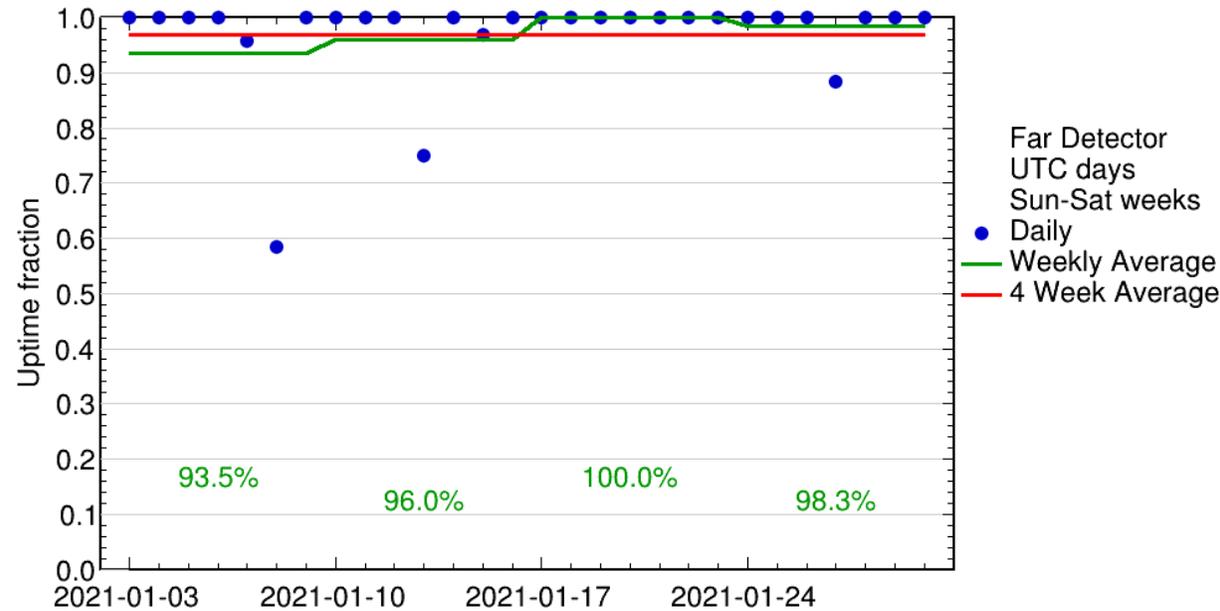
Wenjie Wu (UCI), Matt Judah (UPitt), MU Wei (FNAL)

Proton PMG Meeting

Feb. 4, 2021

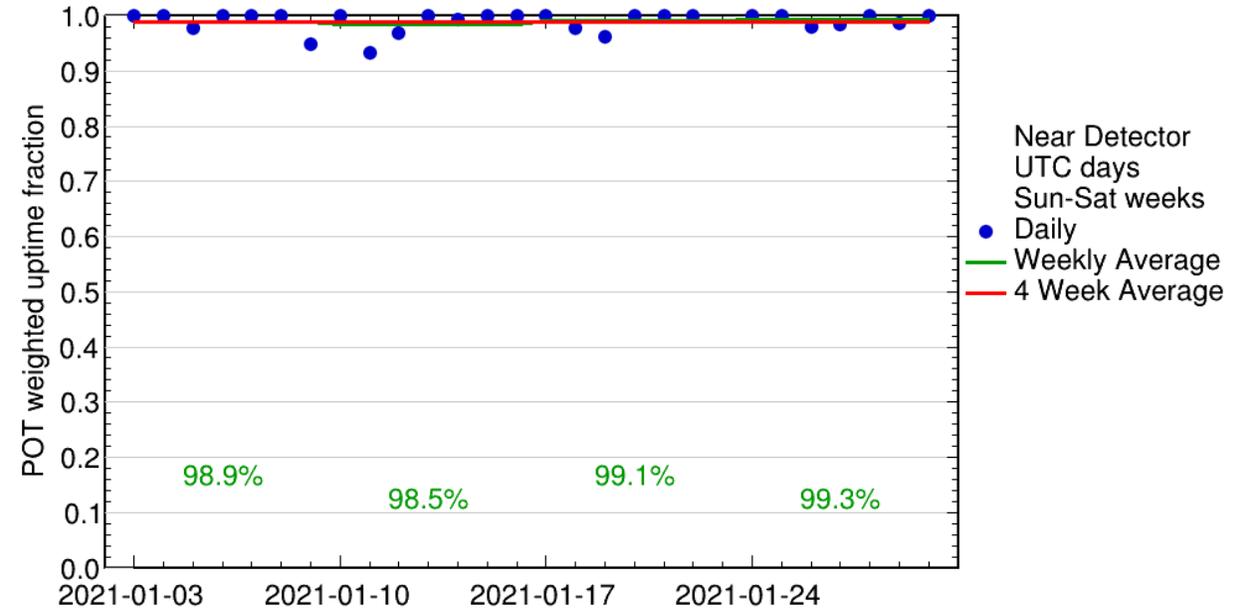


Detector Operations: DAQ Uptime



Far Detector

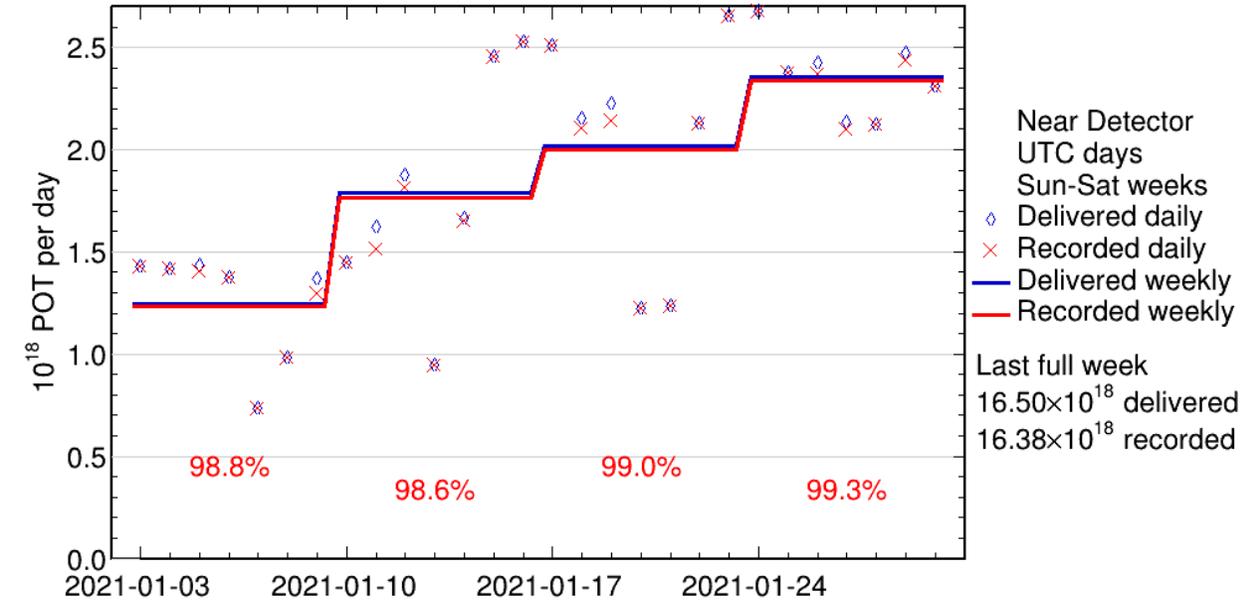
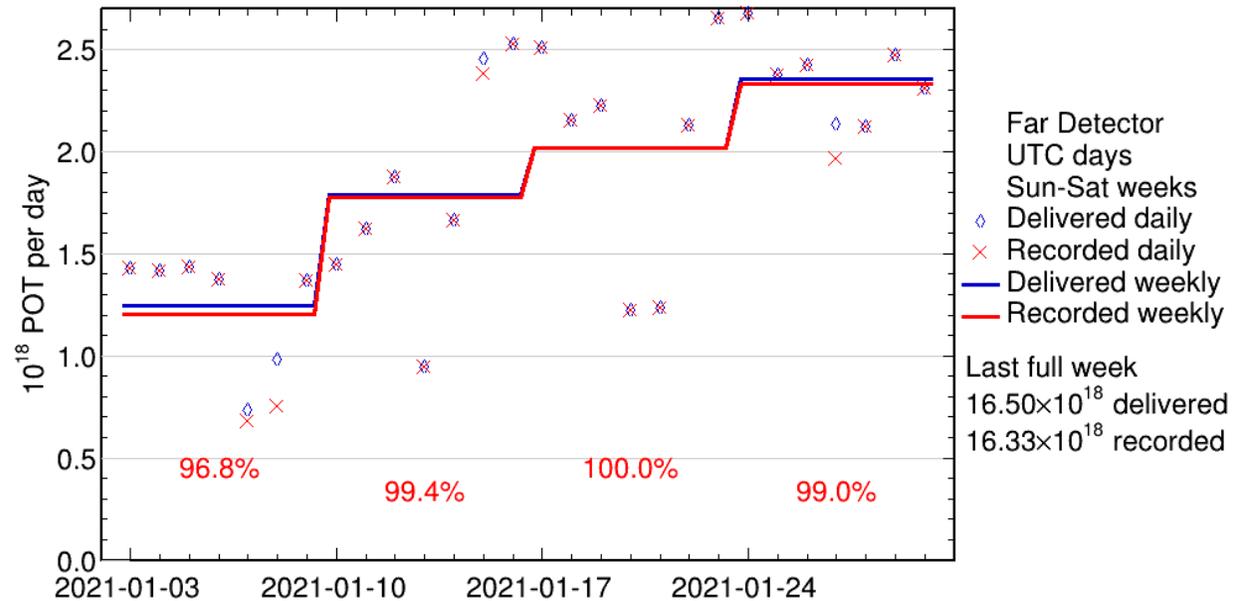
- Total downtime: 20h30m
- Unplanned: 14h30m
 - 11h: DCM (readout module) error
 - 40m: Buffer node error
 - 2h50m: FEBs (Front End) error
- Planned: 6h
 - 6h: DCM (readout module) operation



Near Detector

- Total downtime: ~6h (Unplanned)
 - Small crashes due to datalogger issue
 - Quick response from shifters/experts

Detector Operations: POT Status

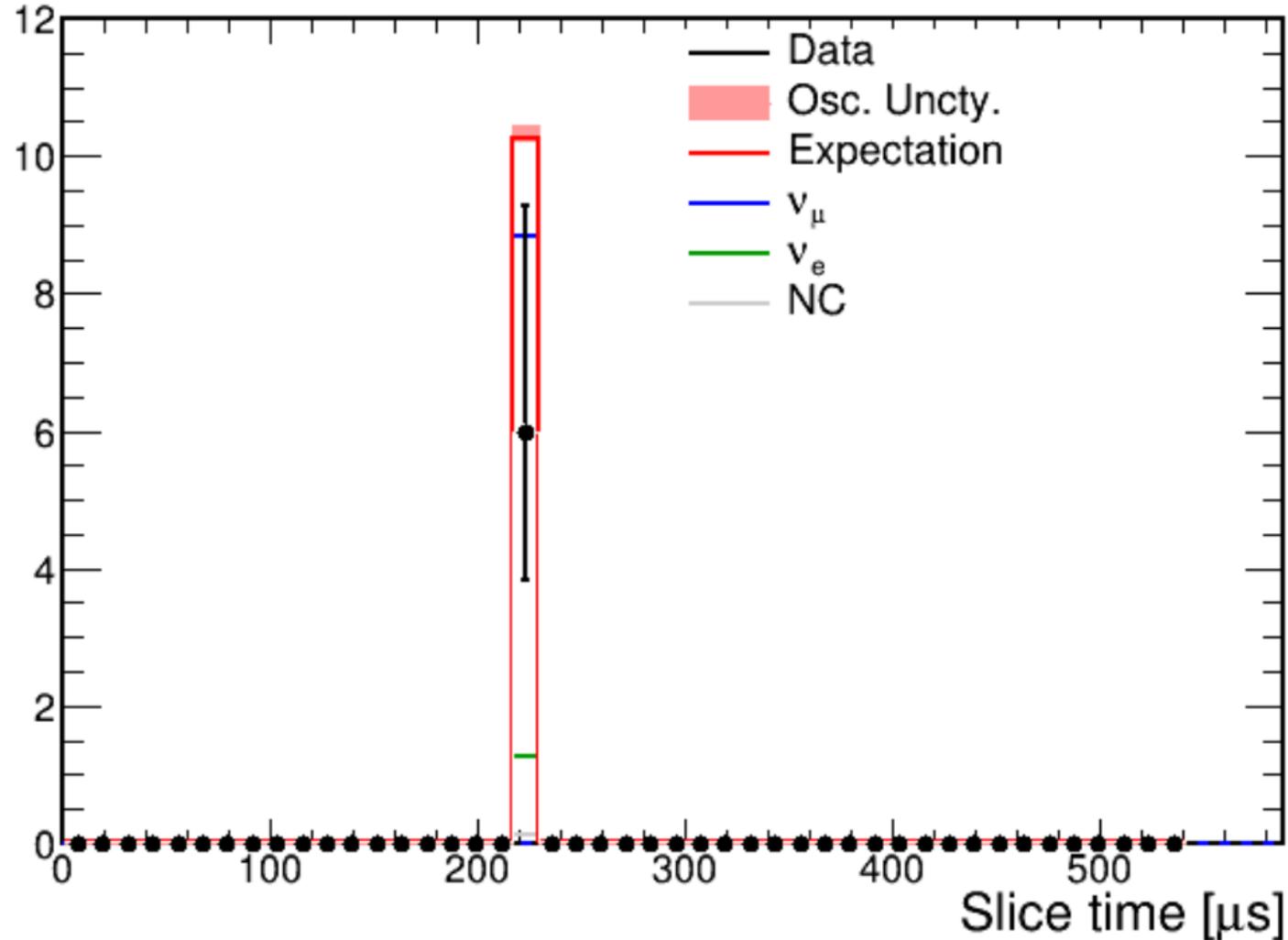


- FY20 POT recorded(FHC): $2.57e20$ ($2.60e20$ delivered)
- FY21 POT recorded(FHC): **$0.72e20$** (**$0.72e20$ delivered**)
- Total RHC POT recorded: $12.69e20$
- Total FHC POT recorded: **$16.99e20$** ($14.32e20$ 14kT equivalent)
- Total POT recorded: **$29.68e20$** ($30.85e20$ delivered)

Far Detector Neutrino Candidate Timing Peak

Data up to 2021-01-24-06:00:00

Last refreshed: 2021-01-31-06:00:00



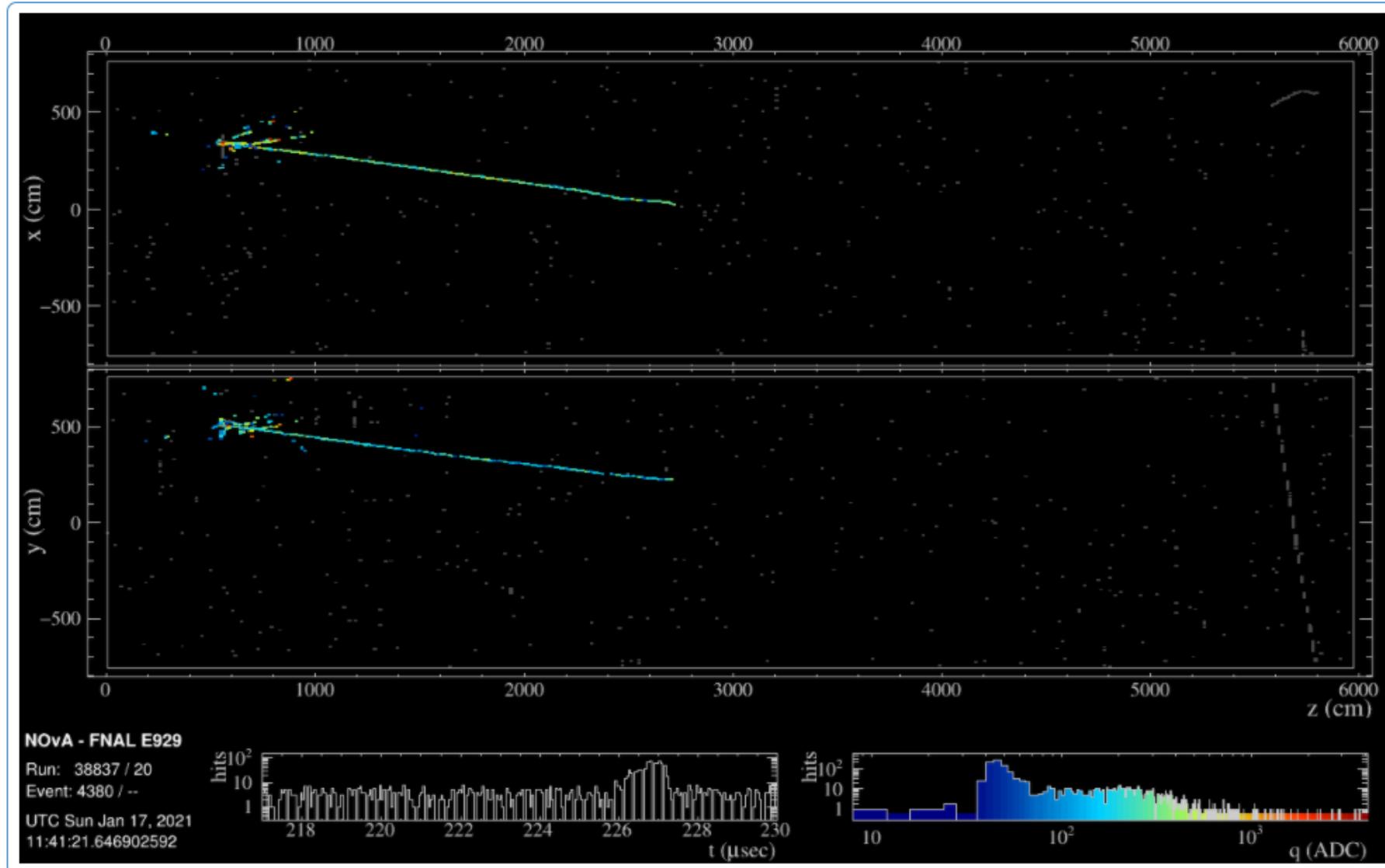
Current Run (Period 11)

- Since Nov. 19, 2020

Beam

- Since Dec. 12, 2020
- FHC mode

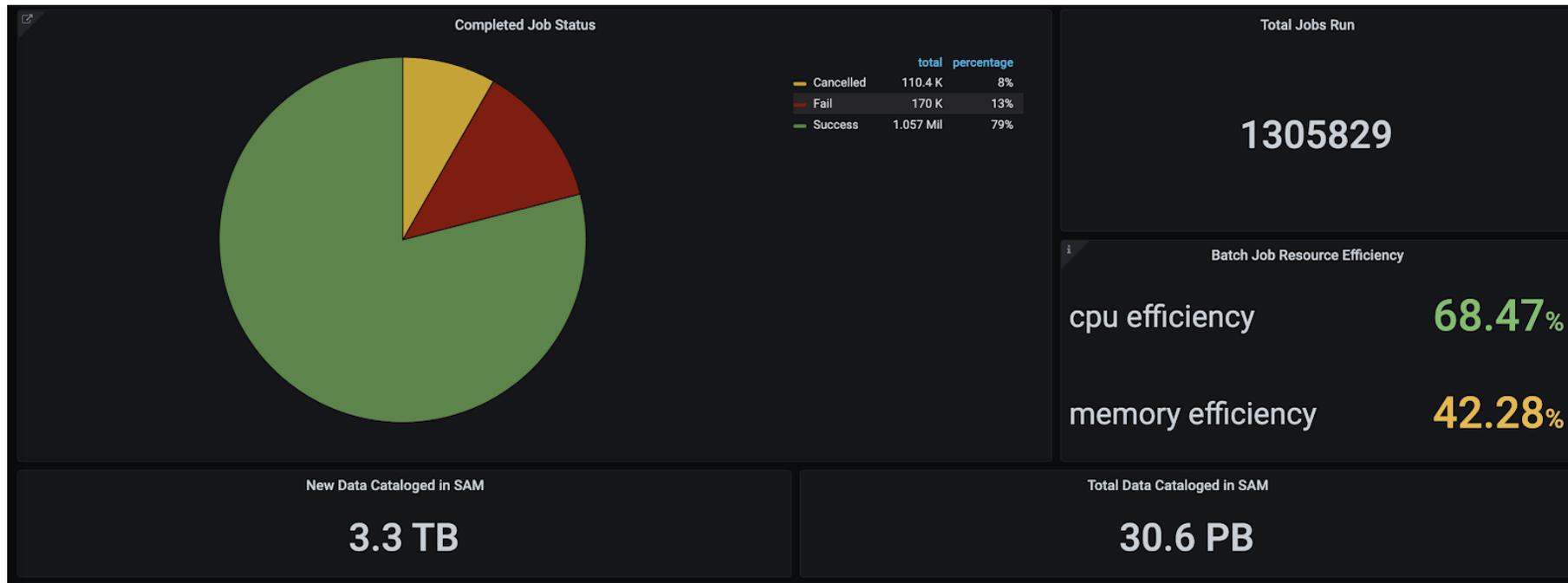
Neutrino Candidate



Operation Highlights

- Web-based checklist shifts model works successfully after beam came back:
 - Shifters: monitor detectors via snapshots at regular intervals;
 - Experts : provide 24x7 on-call or alert-triggered support;
 - Near detector downtime proved shifter/experts would respond to any issues in time;
- Google Voice account has been used as the single phone number by shifters:
 - To communicate with MCR;
 - Technical issues are solved promptly by run coordinators;
- Many thanks to our ELO, **Cindy Joe**, for helping with communication with MCR when there were issues on our end.

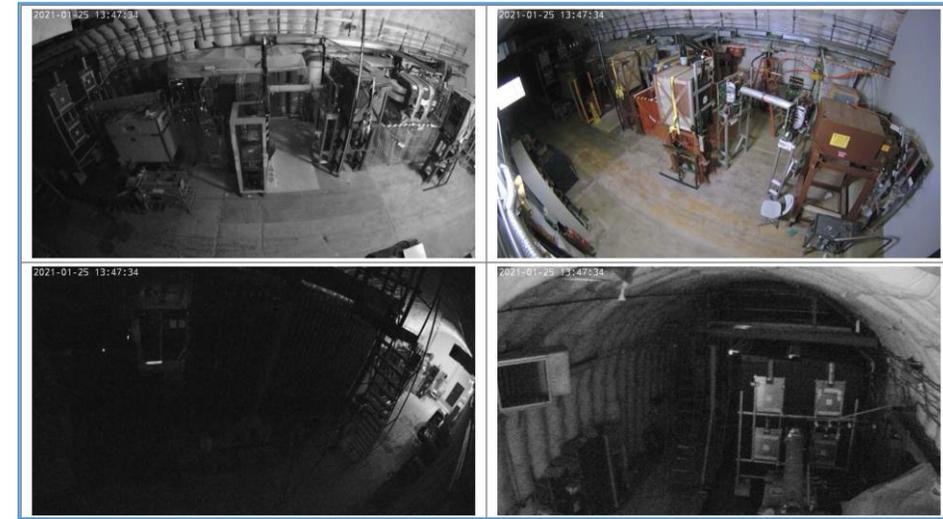
Computing Summary



- Between Jan 6 - Feb 2, 2021 NOvA ran a total of 1.3M jobs:
 - Production jobs: 748k;
 - The Production 5.1 campaign continues, with improved reconstruction for Near Detector analysis;
- We are nearing our 40% nominal simulation sample production, after which we will produce systematics sample before continuing to make rest of the nominal sample;
- We will run calibration over the newly collected data later this week.

Test Beam Status and Plan

- Test Beam is successfully running again: **Period 3!**
 - Began operating the detector and collecting cosmic data on December 4;
 - Beam returned on **January 12**;
- Merged shifter/expert model is working very successfully and enabling the NOvA shifter to diligently monitor Test Beam operations;
- Preliminary studies suggest the tertiary trigger rates and rates of good particles in the NOvA detector appear to be greater than previous, following a concerted effort to improve data-taking during shutdown.
- We are in the early stages of optimizing the beam and other running conditions which we will use for most of our data-taking;



Black: primary beam intensity
Green: particles on NOvA target

