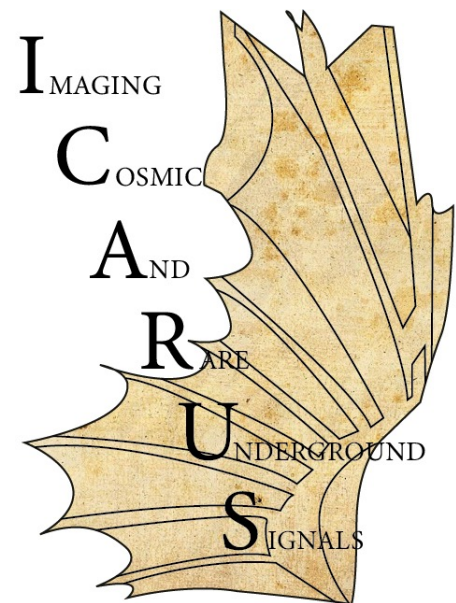


Status of ICARUS Run Operations

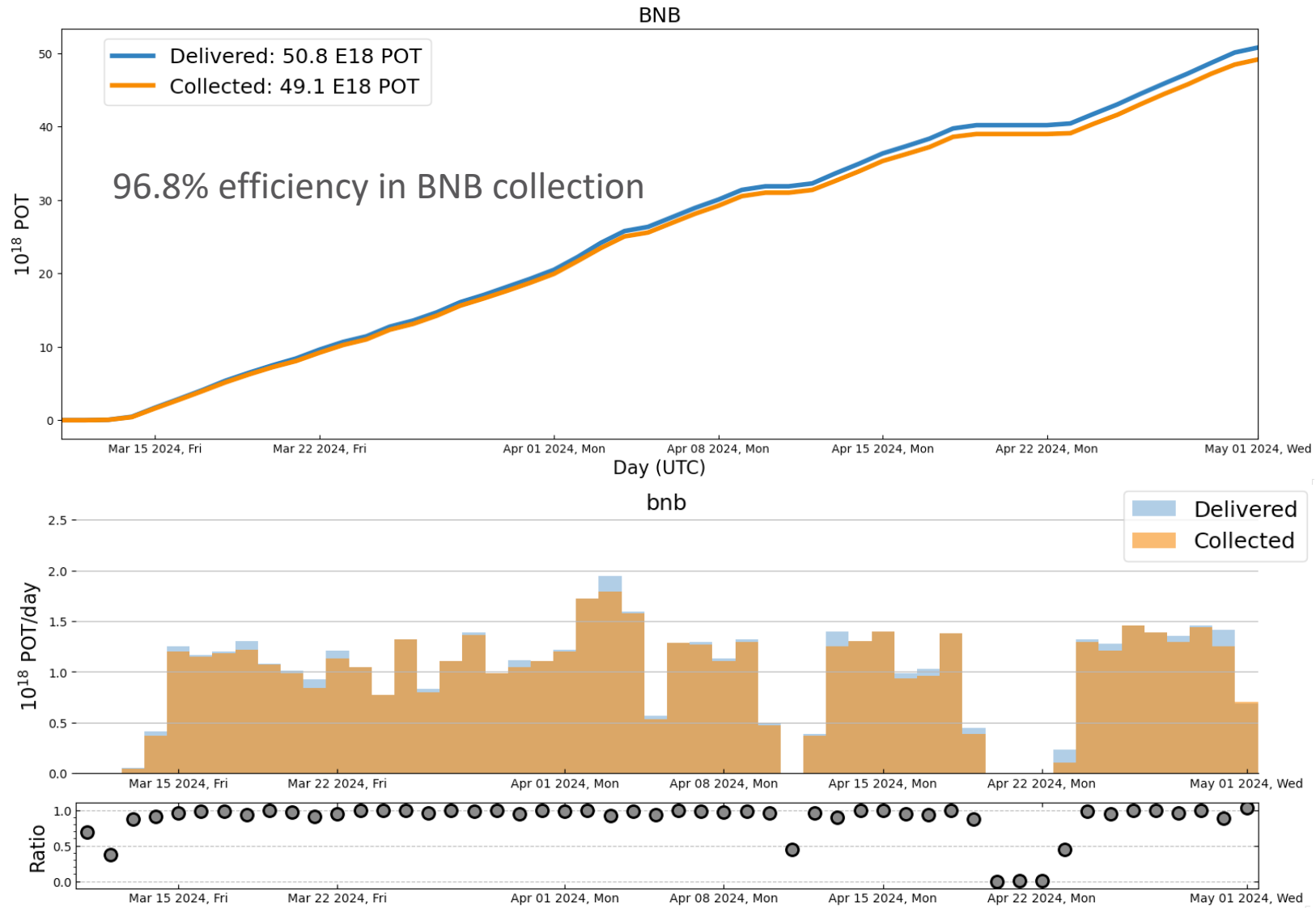


Ivan Caro Terrazas and Matteo Vicenzi
On behalf of the ICARUS Collaboration
Fermilab Proton PMG Meeting
02-May-2024

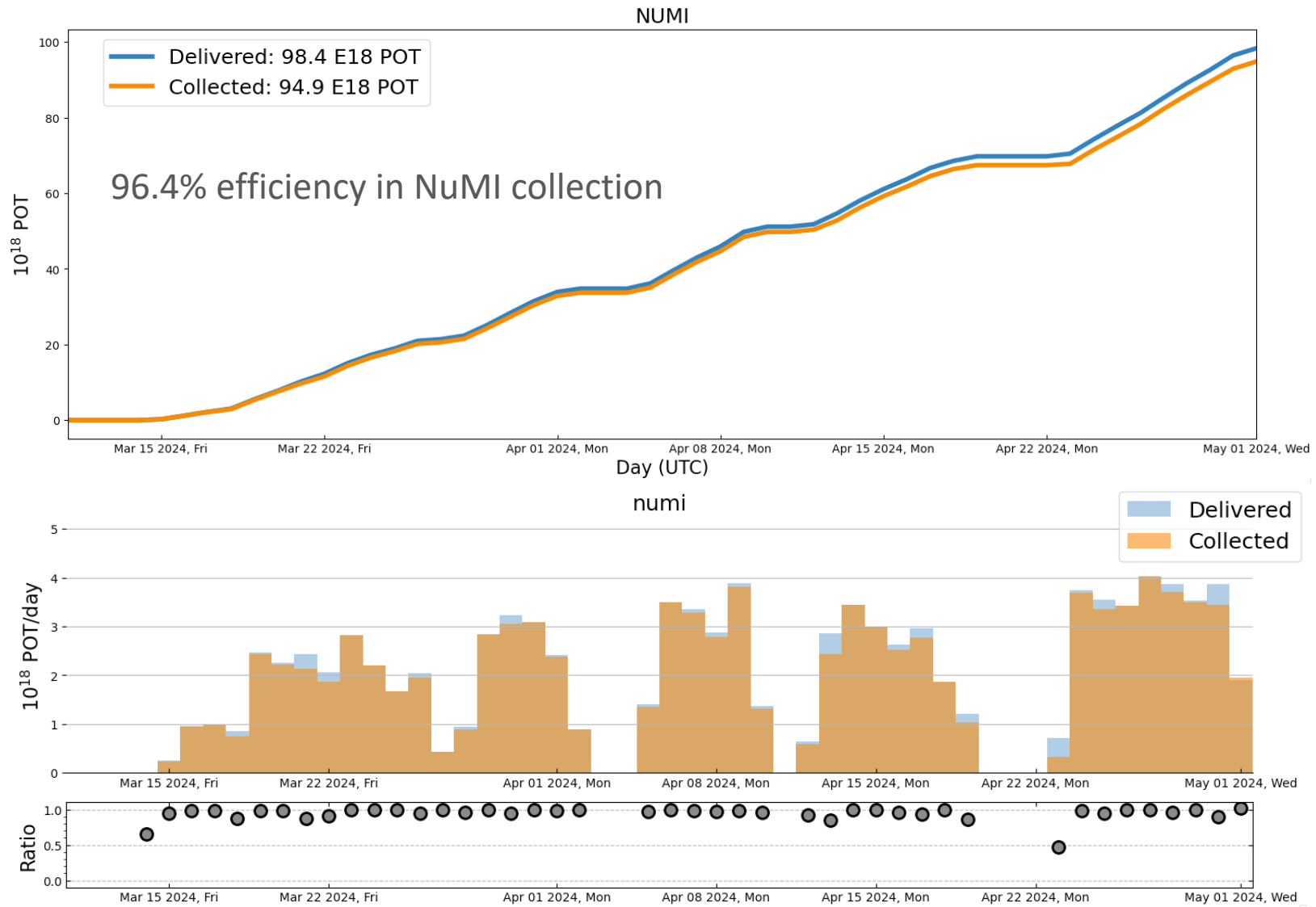


**COLORADO STATE
UNIVERSITY**

ICARUS Run3 POT Plots - BNB

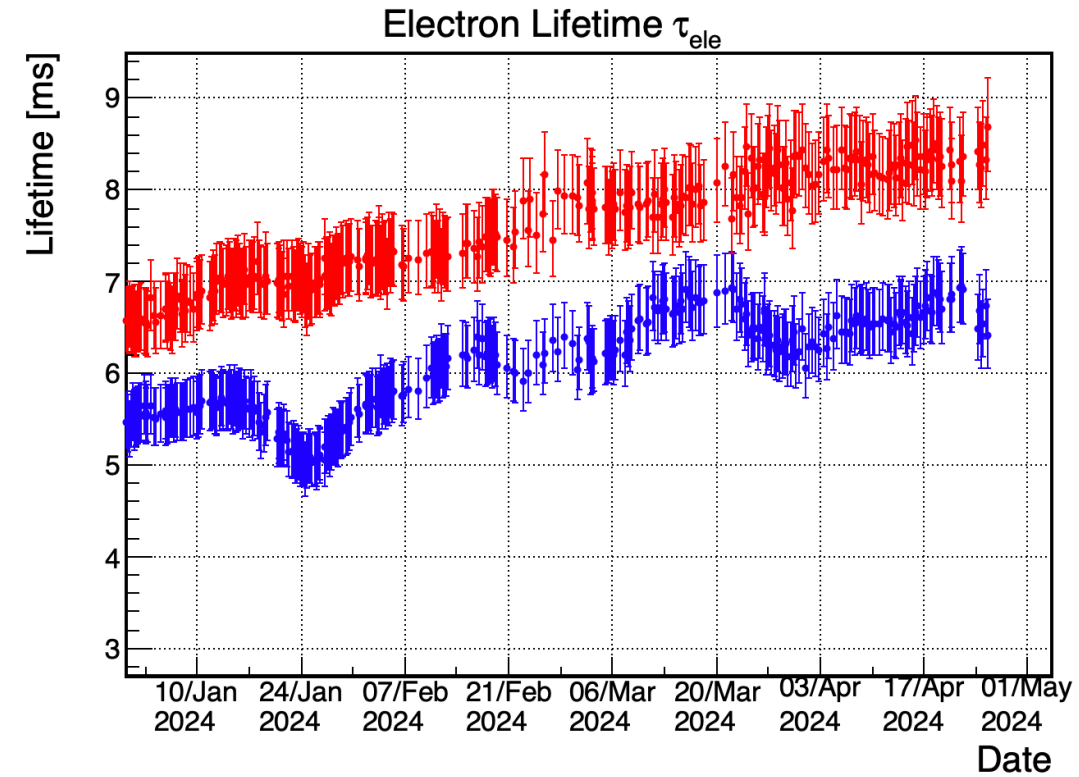


ICARUS Run3 POT Plots - NuMI



Running Status

- ICARUS has been running stably the past month
- Efficiency in DAQ has been above 96% through this data-taking period
- Unscheduled beam downtime was used for taking comic triggered data
 - Model cosmics activating of trigger window
 - Mainly for overlay strategy that ICARUS has adopted
- The detector purity, measured using the value of the electron lifetime is stable since the last PMG meeting
 - Very high across the course of the Run3 period!



Last measurement on Apr 25, 9:48 AM CT

West: ~8.70 ms

East: ~6.40 ms

Hardware Issues



- Failure of the hard-drive on NI-MAX led to us losing our trigger machine
 - After swapping the failing part with the spare PXIe-8840 from another NI crate system was ack online
- Power failure in central server rack
 - Input AC power cord to AC switch box was slightly rotated
 - Took out connection to detector monitoring machines
 - icarusgateway01/02, icarus-db01/02 and icarus-nfs01/02 went down
- Failure of icarus-db01
 - Night of power failure of rack (from previous point)
 - OM, EPICS Archiver, FTS and MongoDB (DAQ configurations)
 - icarus-db02 became primary database machine
- **Experts are currently investigating issues**
- **All failures listed were during beam-off time**



Summary



- ICARUS continues to take data from the BNB and NuMI beams for the past month with a very high efficiency of $> 96\%$
- The collaboration thanks AD for the very high-quality beam
- Data acquisition has been running smoothly with only a few crashes
- Lost one trigger and one database machine, but we were able to recuperate using spares
- No changes are expected in detector operations for the remainder of beam operations



Thank You



Backup

