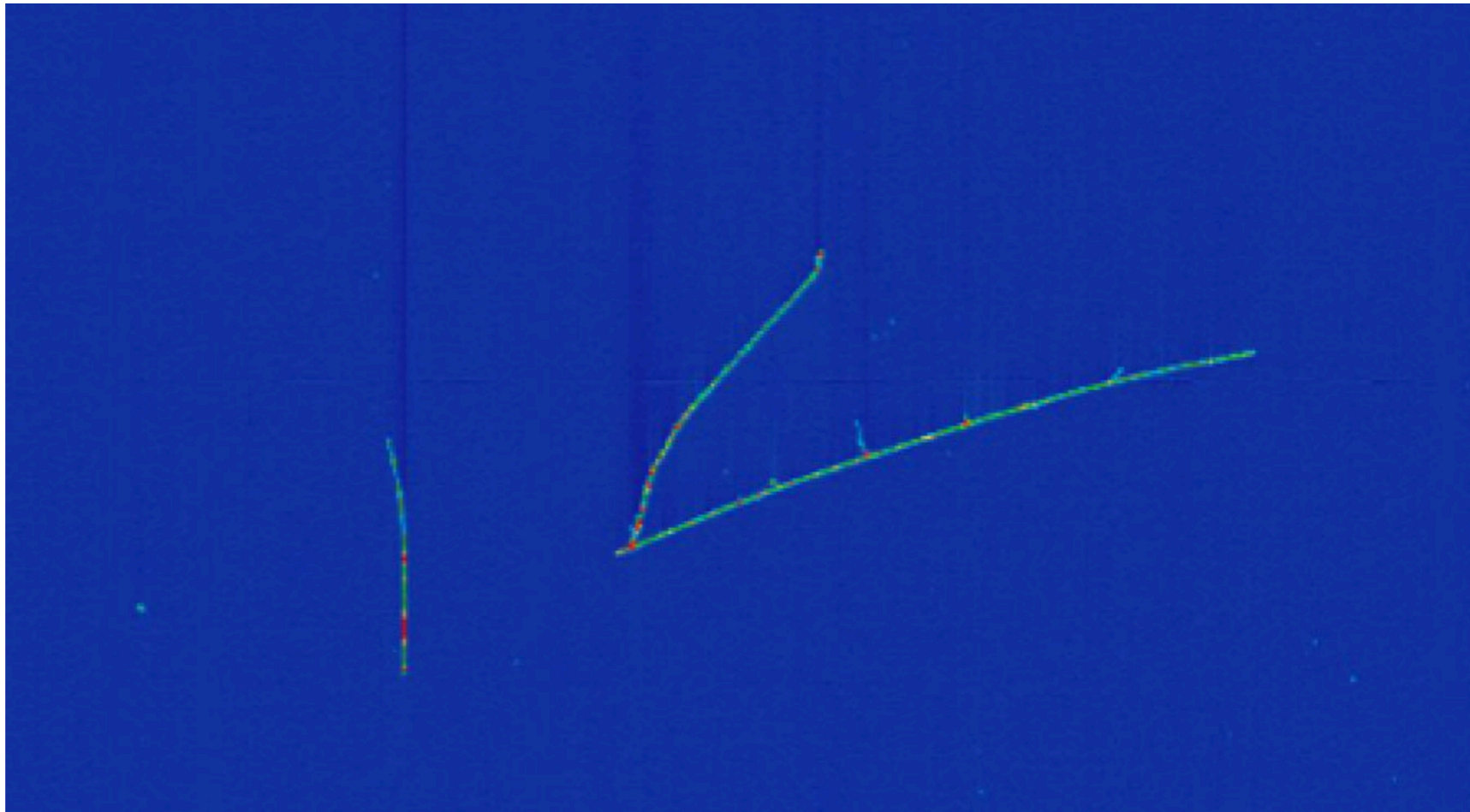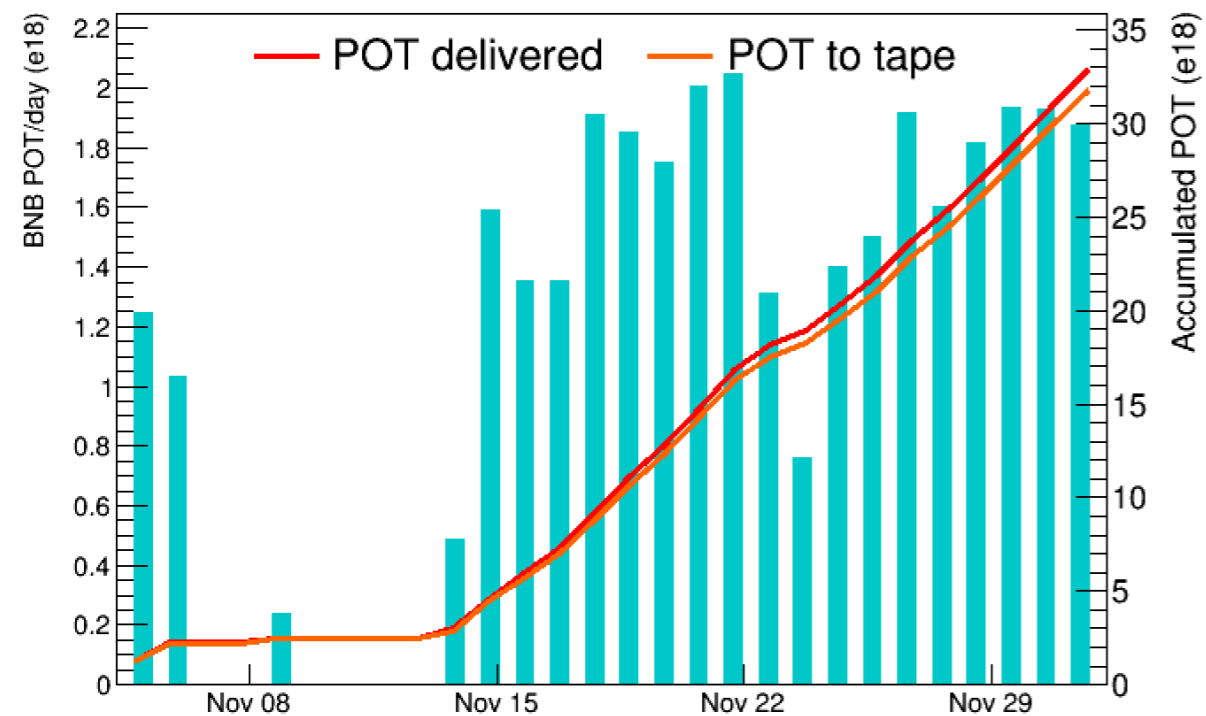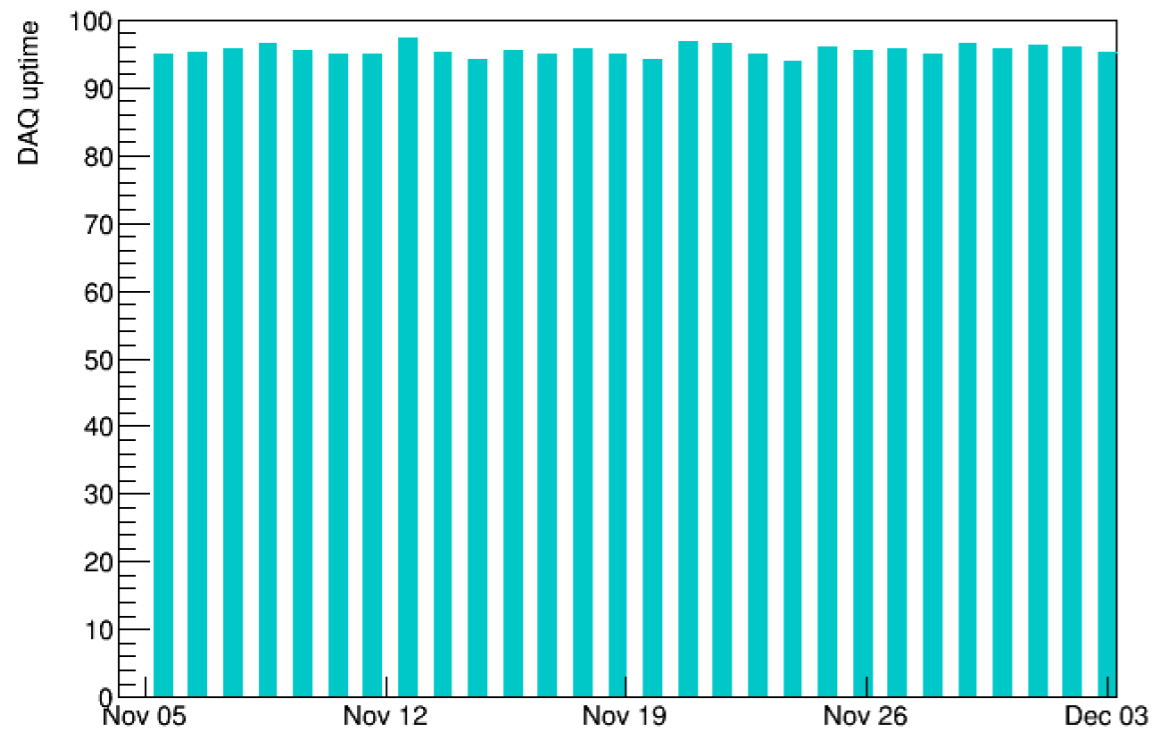# MicroBooNE Report

Žarko Pavlović & Ralitsa Sharankova
Proton Management Group Meeting

December 5, 2019

Data taking

- **Average DAQ uptime 95%**

- POT delivered: 3.29e19
  POT on tape: 3.18e19
  Fraction recorded: 97%

Computing Summary

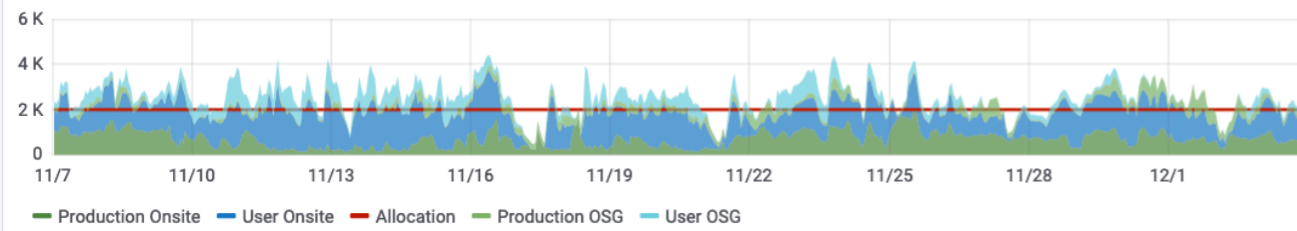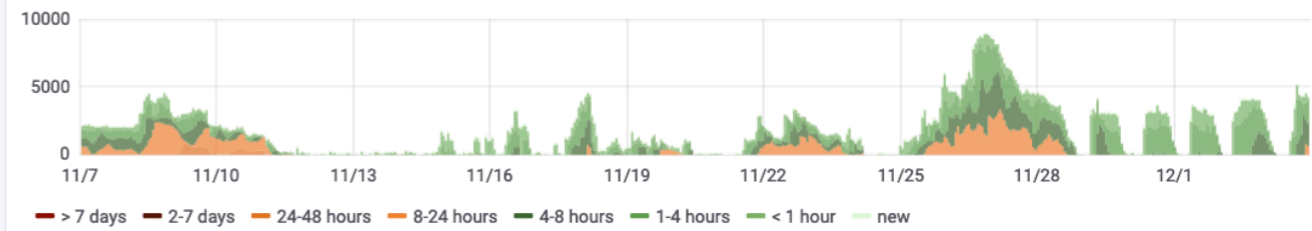| Average Jobs Running Concurrently	Total Jobs Run	Average Time Spent Waiting in Queue (Production)
2537	**1963937**	**2.340 hour**

∨ Running Jobs

Running Batch Jobs

Legend: Production Onsite, User Onsite, Allocation, Production OSG, User OSG

Queued Production Jobs by Wait Time

Legend: > 7 days, 2-7 days, 24-48 hours, 8-24 hours, 4-8 hours, 1-4 hours, < 1 hour, new

∨ Completiong and Efficiency Stats

Job Success Rate

92%
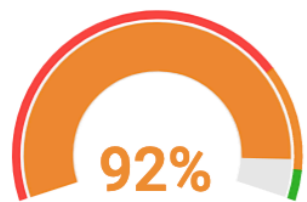
Job Success & Failures per Day

Legend: Success, Fail, Held
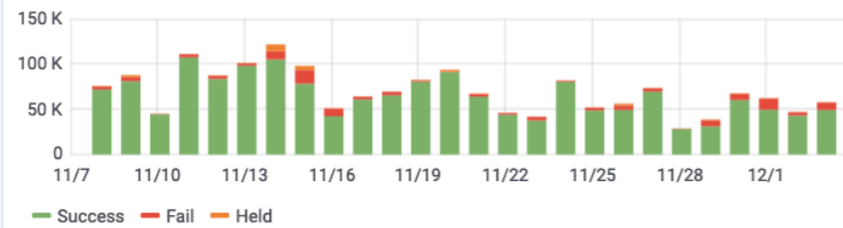
Overall CPU Efficiency

64%
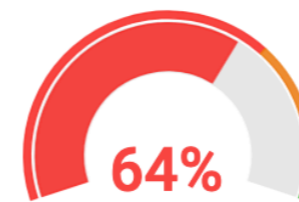
Total Time Wasted by Running Jobs

Legend: Instantaneous, Cumulative
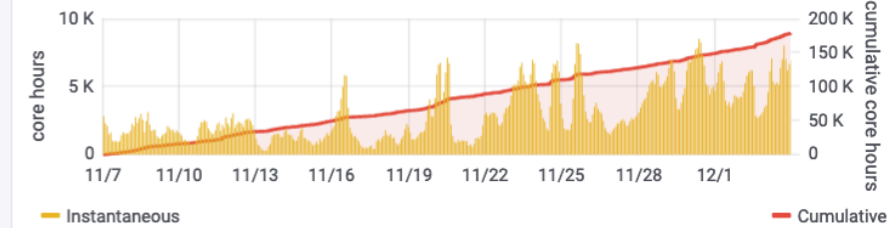
∨ New row

New Data Cataloged	Total Data Cataloged
6.0 TB	**22.9 PB**

Trigger inefficiency

- Dead time ~30ms after trigger may result in a trigger inefficiency

- When NuMI and BNB events get closer than 30ms we record only the one that came first

- Not significant in past runs, but seen some inefficiency with NuMI during special runs (low intensity, target scans, …)

- More pronounced during this run (overall couple % with NuMI, but also seen losses with BNB)

- Many thanks to Cindy Joe, John Kuharik and MCR on identifying issues with timeline and making adjustments when possible (rearranging events by hand)

- Talking to ICARUS and SBND to understand impact

- Note that besides deadtime, events getting closer than few ms would present a problem for LAr TPCs due to O(few ms) readout window

Triggers and beam spills Wed Dec 04 2019 14:50:00 GMT-0600 (Central Standard Time) - Thu Dec 05 2019 02:40:00 GMT-0600 (Central Standard Time)
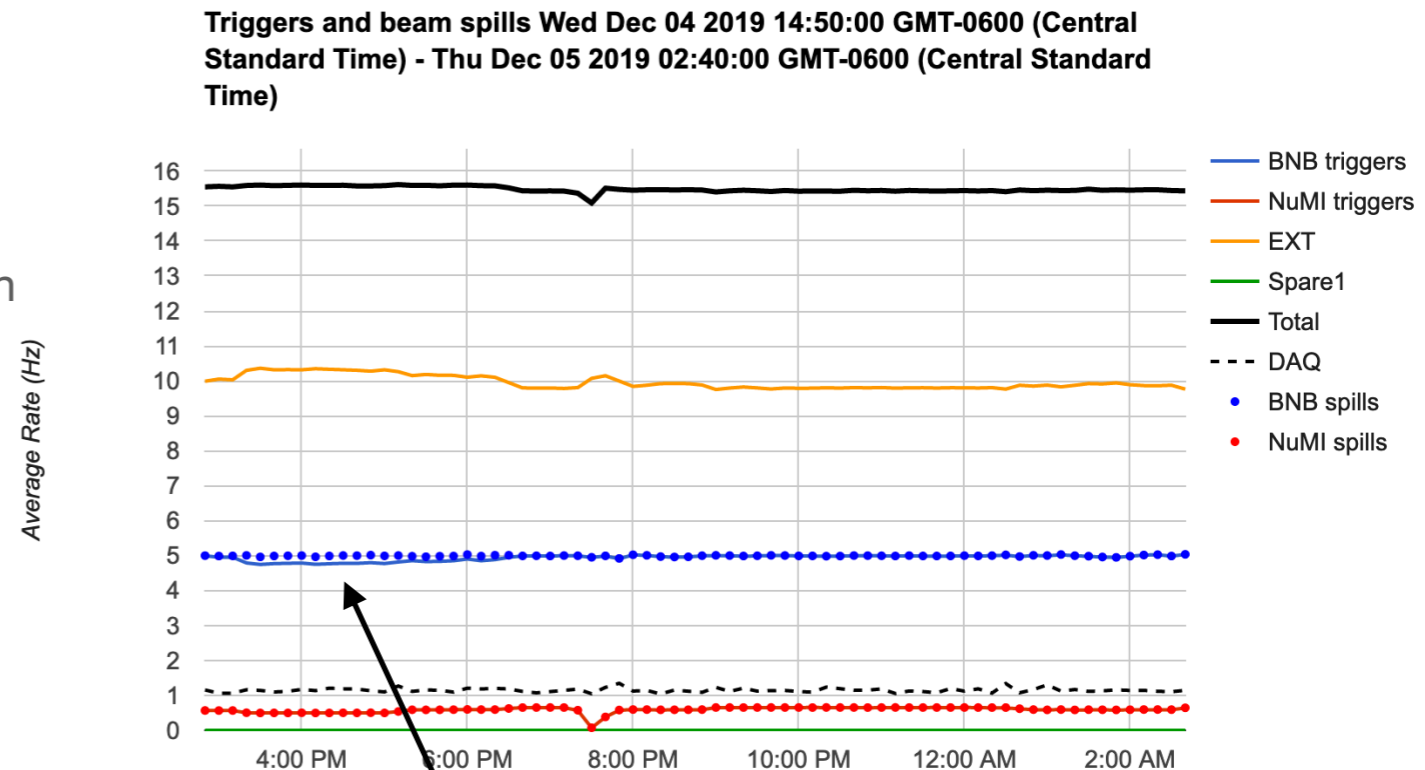
Few percent loss with BNB

Argon sample

- Roberto Santorelli (CIEMAT in Madrid) has offered to help us analyze Argon sample

- Capable of measuring ppb contaminations

- Better understand MicroBooNE scintillation light decline over time

- Catch some unexpected contamination (like the Hg found in the gas used for ArDM)
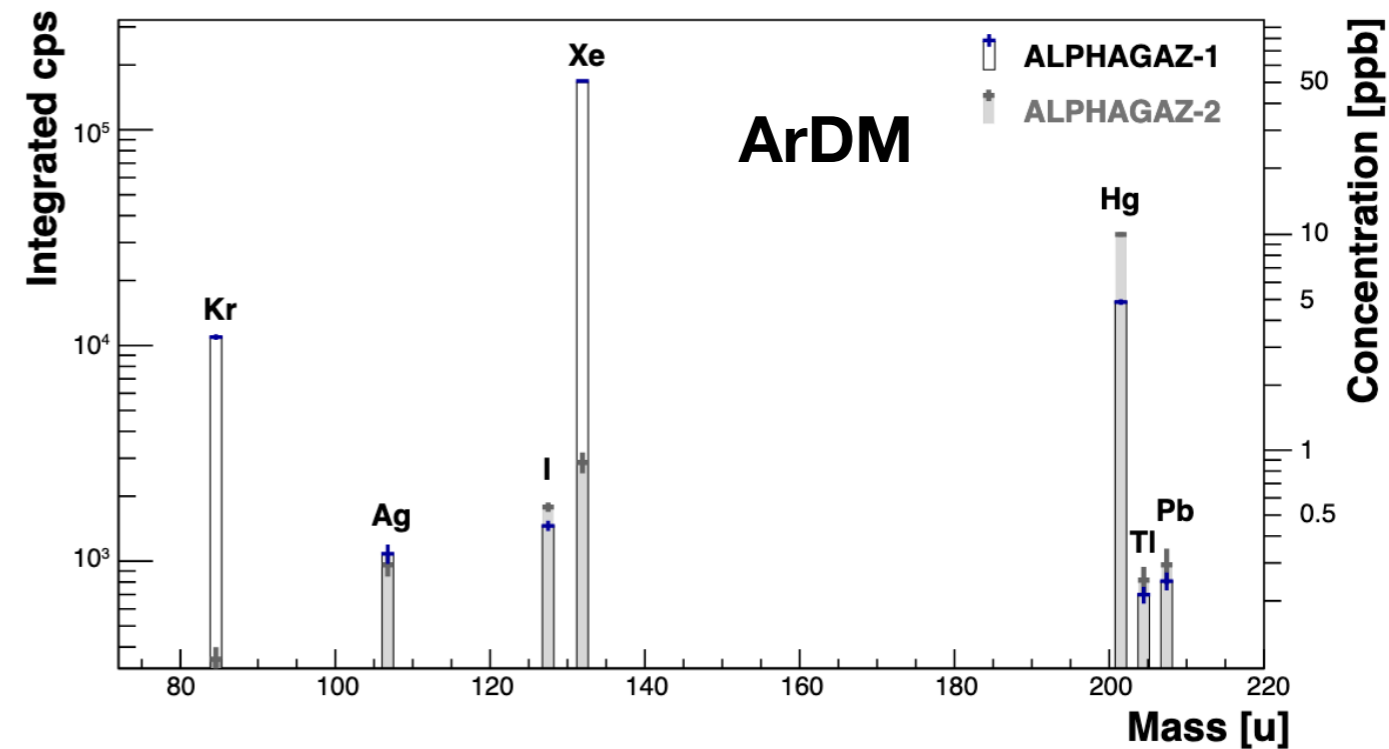
Physics news

- New paper: "Search for heavy neutral leptons decaying into muon-pion pairs in the MicroBooNE detector" on arxiv: 1911.10545 and submitted to PRD

- Upcoming analysis workshop at BNL
(December 9-13)