E906/SeaQuest Report

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for the SeaQuest Collaboration

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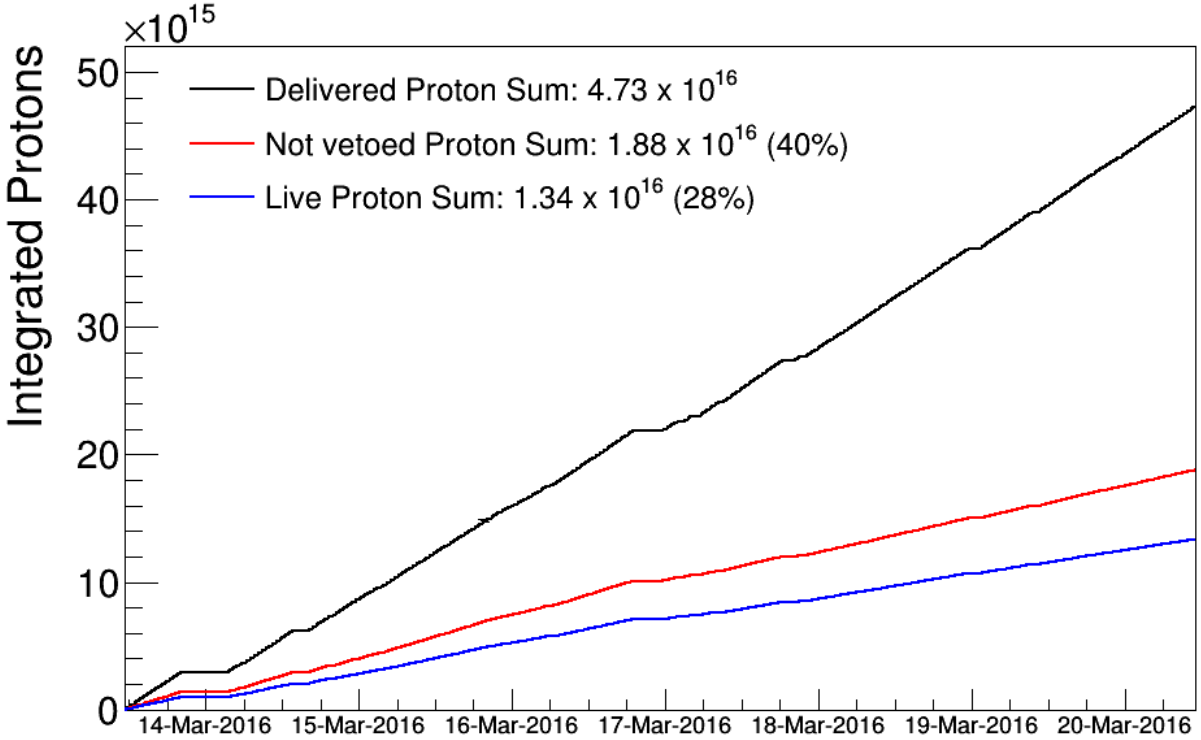
Beam.

Total protons accumulated: 1.34×10^{16}.



- Few issues receiving BOS (begin of spill) and EOS (end of spill) information → fixed by rebooting target computer and restarting scripts.
- Adjusted QIE inhibit threshold to 500 for nominal data taking.

Targets.

- Pressure spikes for H_2 $\rightarrow$ switched to supply pressure.
- D_2 pressure alarm went off because of pressure right at the upper limit $\rightarrow$ back to normal soon after.
- Flammable gas alarm (also noticed by MCR and Communication Center) $\rightarrow$ back to normal after a few seconds.

  - D_2 pressure alarm after 5 min $\rightarrow$ back to normal soon after.

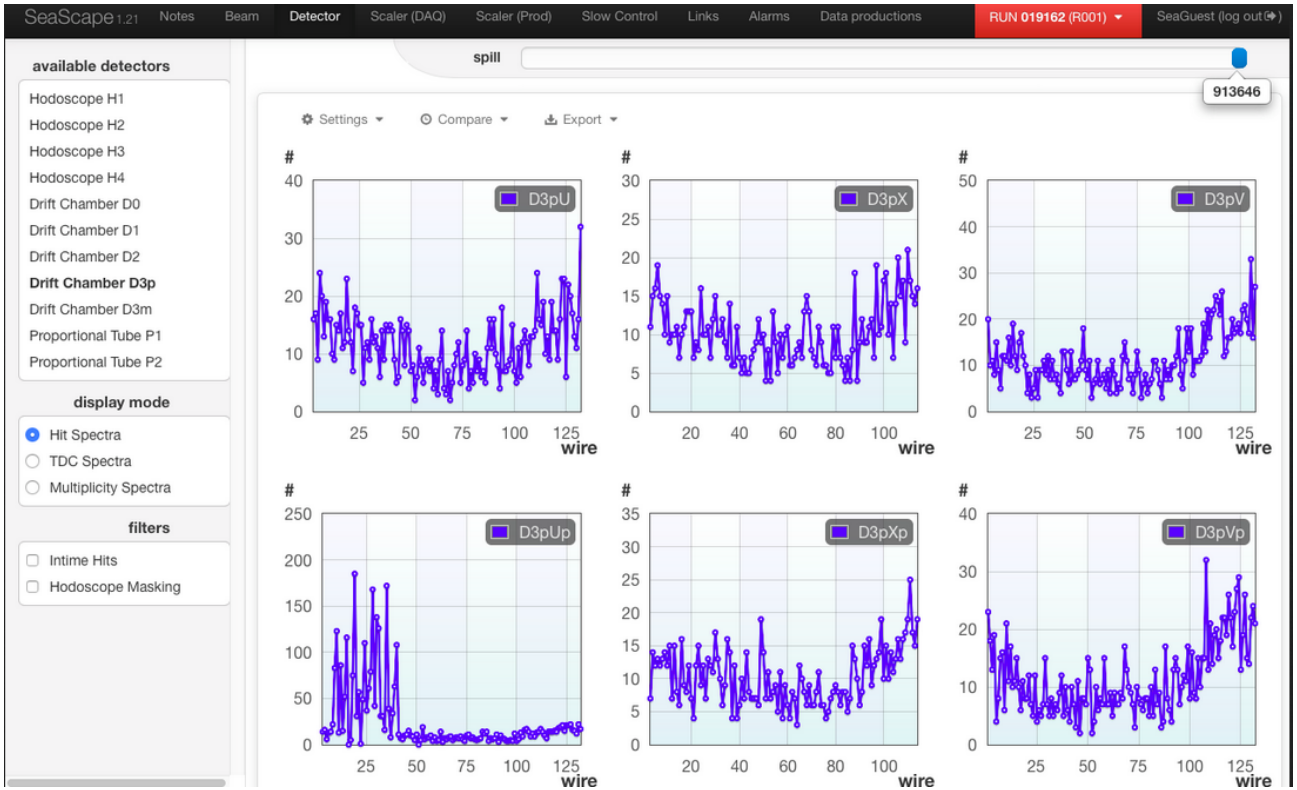
Station 1.

- Survey done last Monday.
- Running with both 3-way and 4-way premix gas:
  - 4-way premix for 8h/day $\rightarrow$ 10am - 6pm
  - 3-way premix for 16h/day $\rightarrow$ 6pm - 10am
- HV limit adjustments for Chamber 1 throughout the week, currently at 1640 V and average current between spills is 207.2 μA.

Stations 2, 3 and 4.

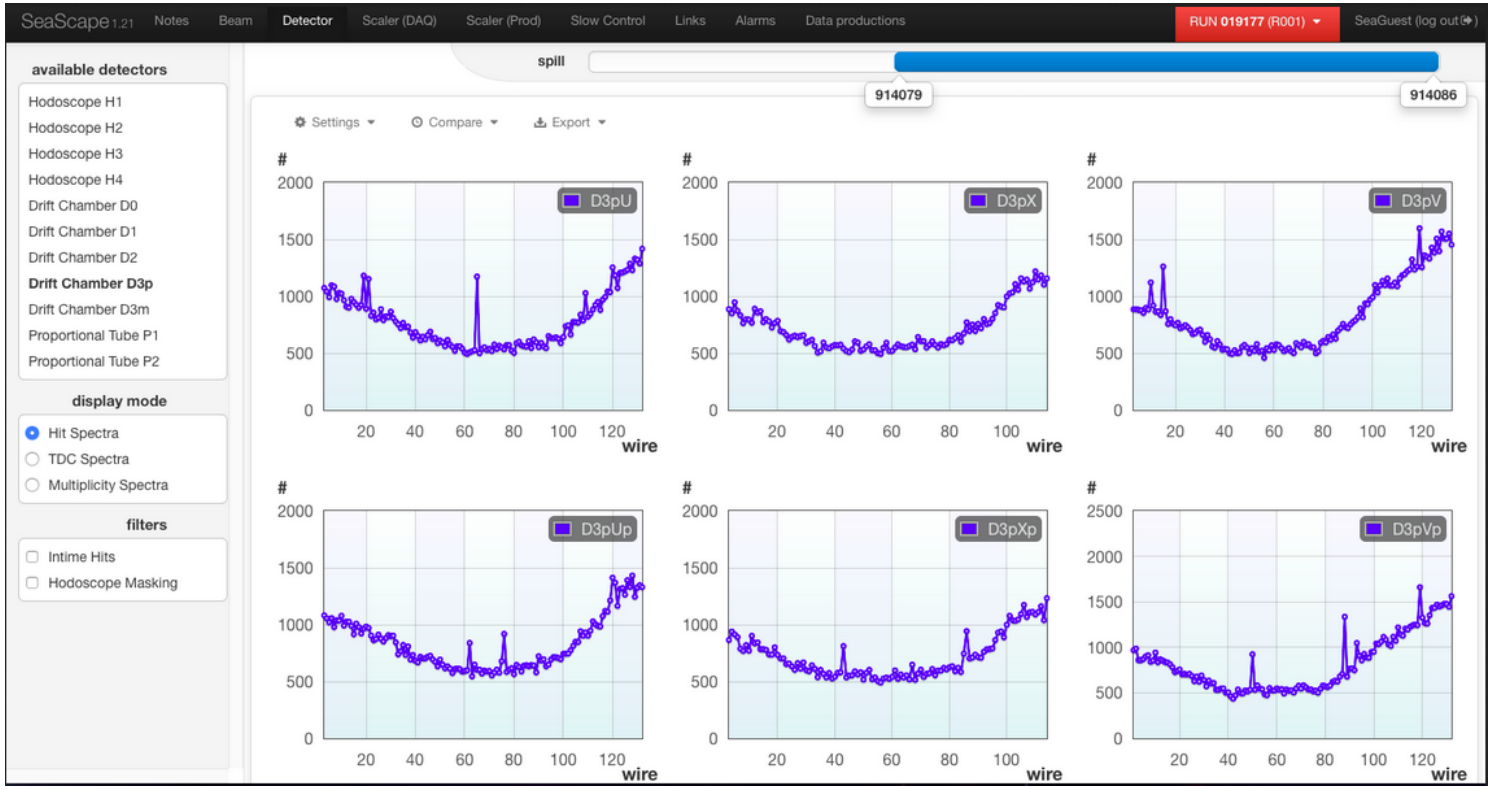
- Replaced 2 level-shifter boards for D3Up because of noise on Thursday → hit distribution went back to normal.

Before replacement:



Stations 2, 3 and 4.

After replacement:



- Other stations are working well.

Hodoscopes.

- All Station 1 hodoscopes were scanned one by one to make sure they had the right HV value after the installation of Chamber 0.
- We found two swapped HVs: H1B PMTs 22 and 23; H1L PMTs 11 and 12.
- The cables on the hodoscopes were the culprit $\rightarrow$ swapped them and fixed the issue.

Data Acquisition.

- Some issues with our "watching" script $\rightarrow$ fixed by restarting it.
- Scaler DAQ alarm $\rightarrow$ fixed after restarting both beam DAQ and target computer.

Summary.

- Have been taking nominal data since the installation of new Station 1 with both old and new Chambers.
- Running Chamber 1 with 3-way premix gas during the day (10am - 6pm), and with 4-way gas from 6pm to 10am.
- Though we ran through some issues last week, they were quickly fixed.
- Station 1 hodoscopes were scanned and the swaps found were fixed.

Plan: continue taking nominal data.