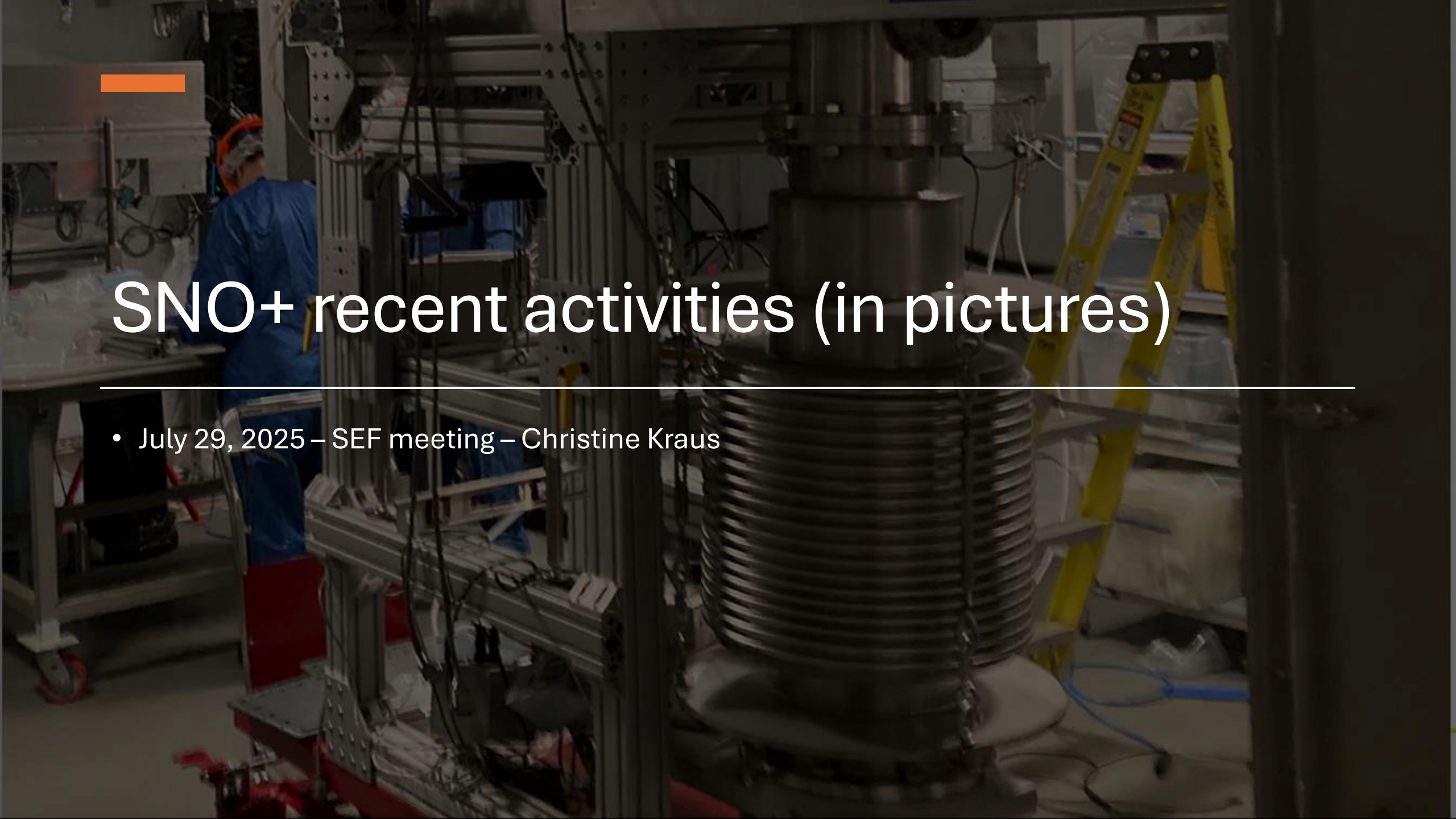
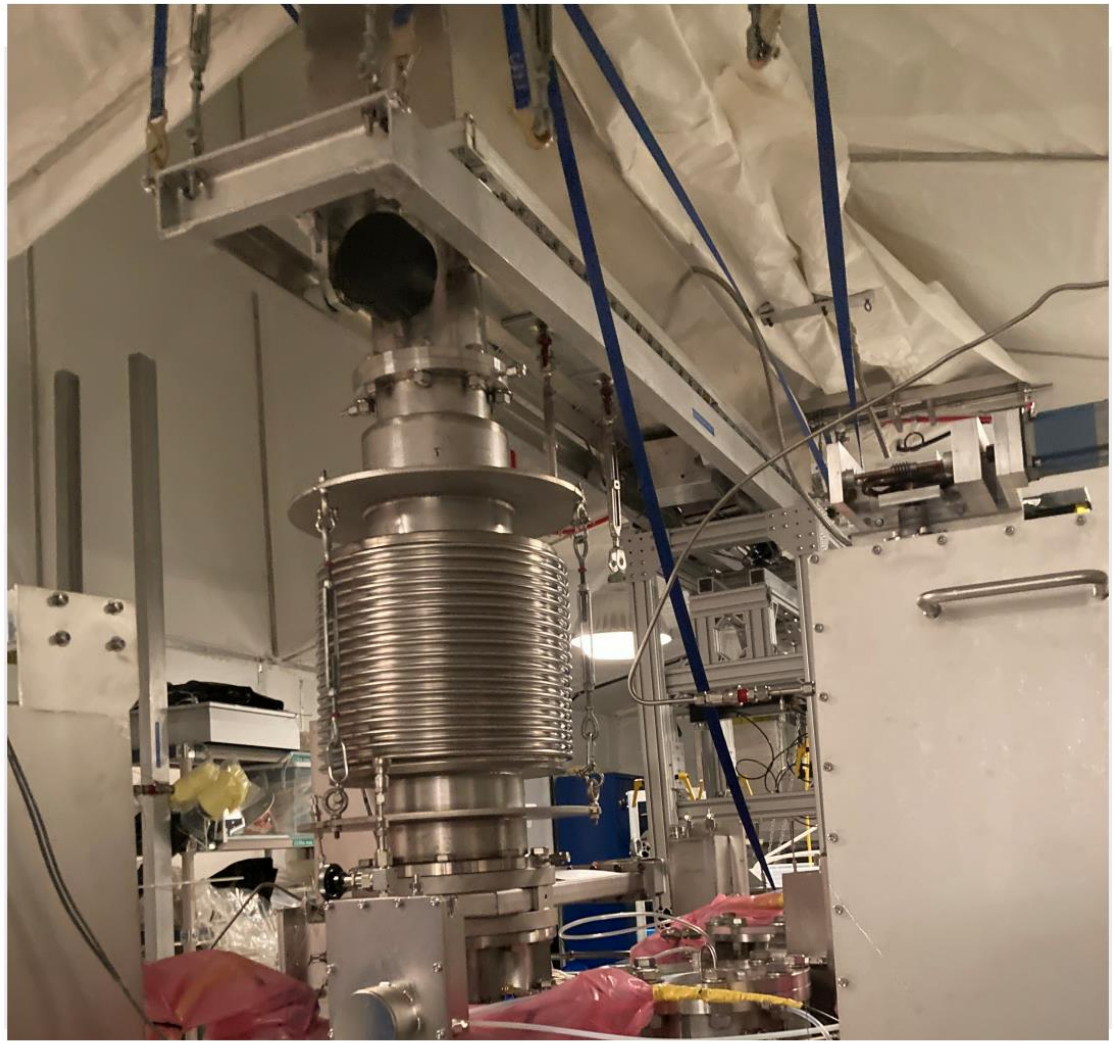


SNO+ recent activities (in pictures)

- July 29, 2025 – SEF meeting – Christine Kraus

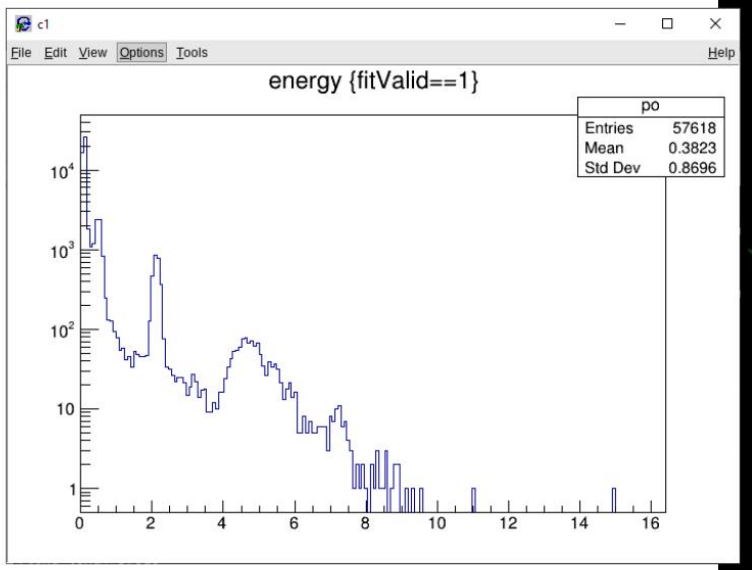
The Calibration Deployment System is Now Live

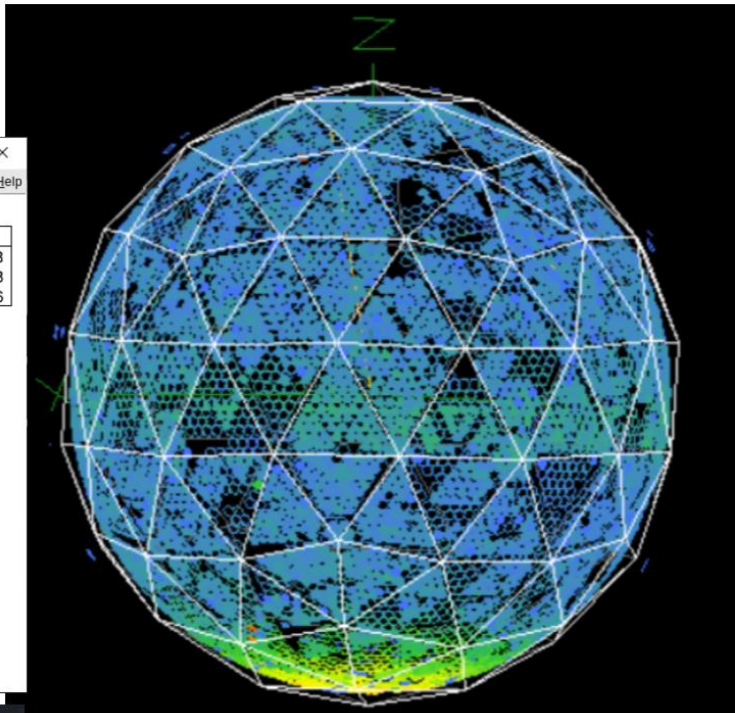
- Have deployed AmBe source into the detector
- Could smoothly move the source to the bottom of the detector
  - Umbilical ~15 cm short of the bottom of the AV
  - Combination of
    - URM positioning (too high) and
    - removing too much umbilical to expose the fibre (during the source connector installation)
- Intervention necessary to recover from hitting the limit
  - Retrieval smooth after intervention

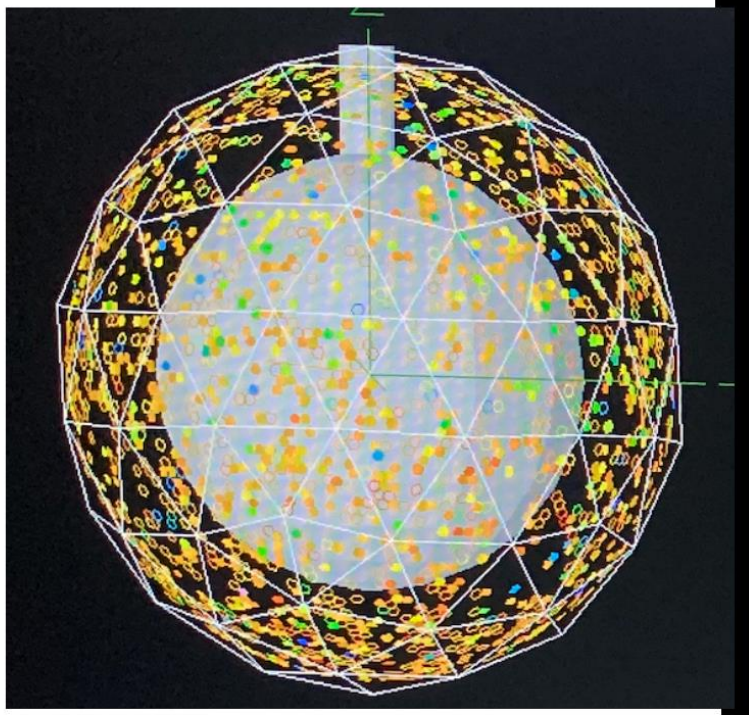


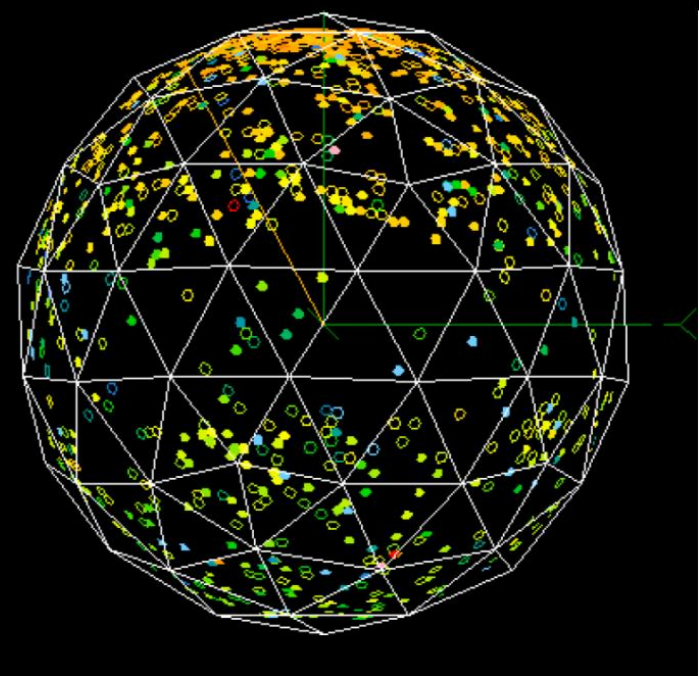
AmBe Source Deployment

- Z-scan only
- 20 minute runs at -550 cm, -400 cm, -300 cm, 300 cm, 0 cm, 400 cm, 550 cm, 650 cm, 950 cm, 1150 cm
- 16, hour long, runs at z=-14.5 cm
- Various runs replicated interesting conditions
  - Near AV interactions
    - Clear internal reflection bands
  - Neck events
  - Central events

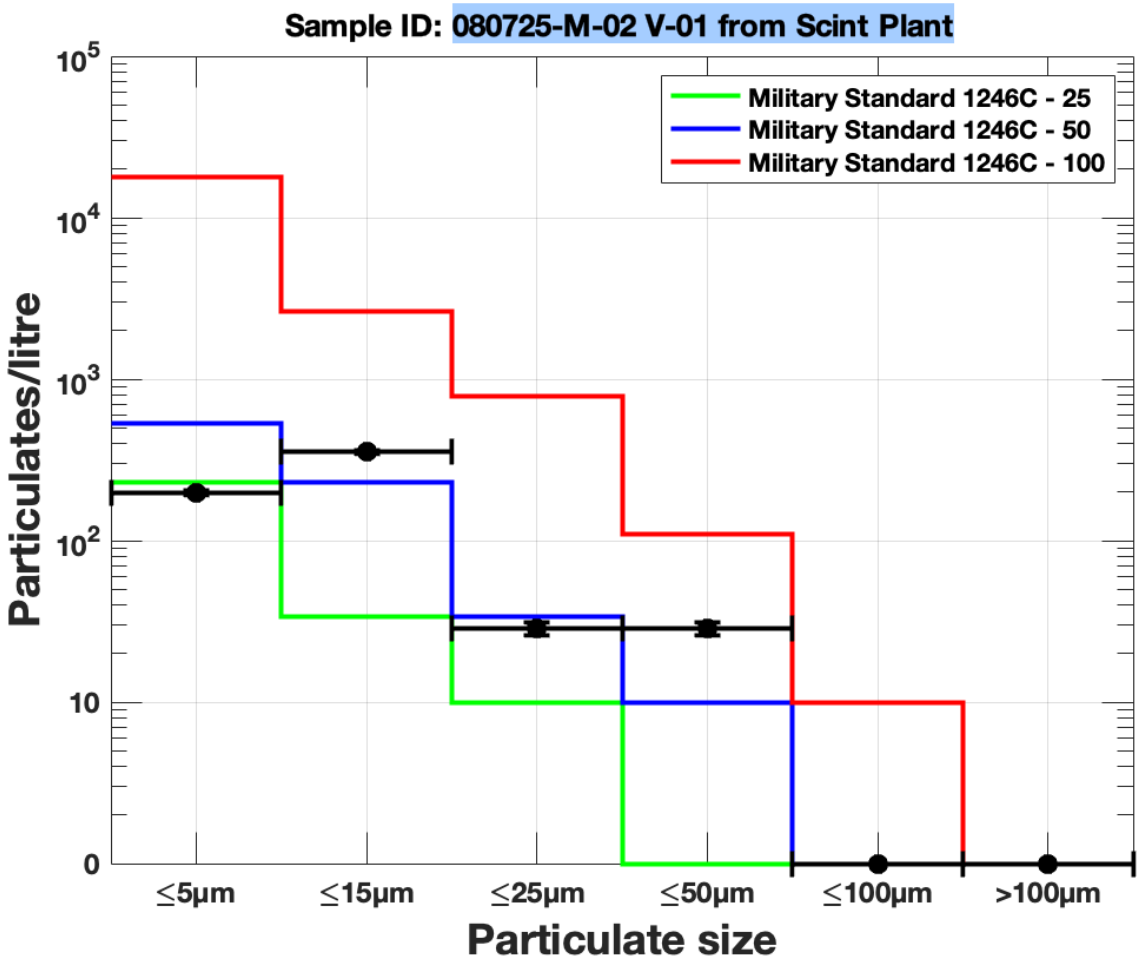


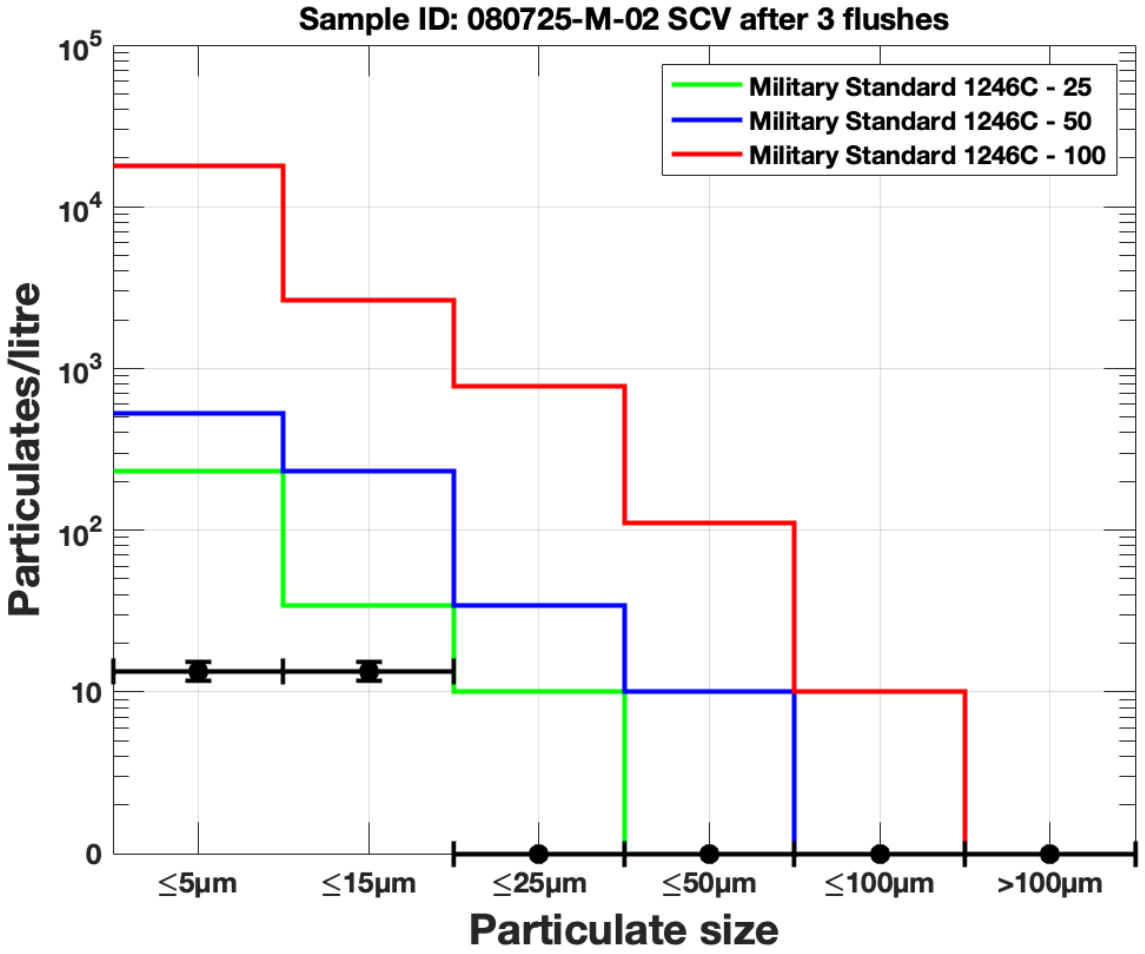






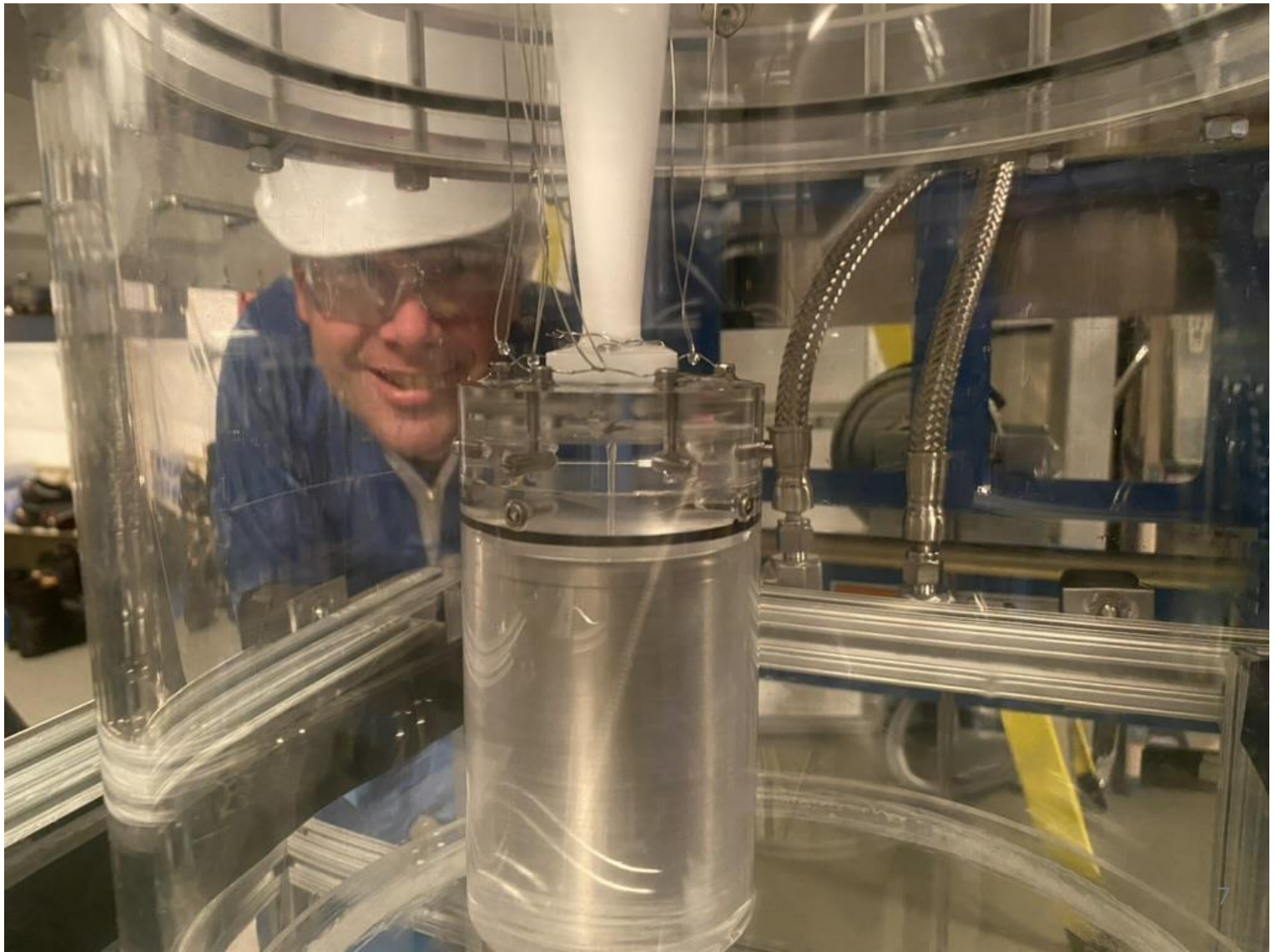

LAB fill tank
Filter housing
(0.05micron PTFE)
After filter, to nozzles
Sample port
Return to the pump
Diaphragm pump



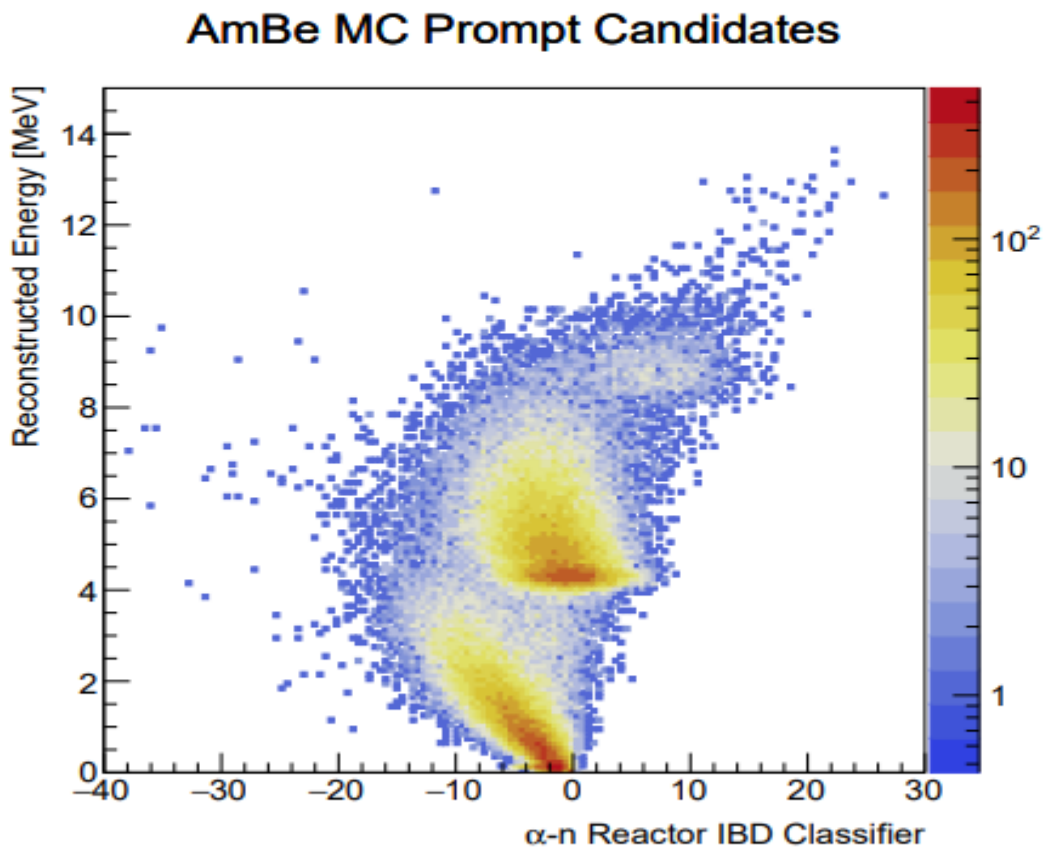


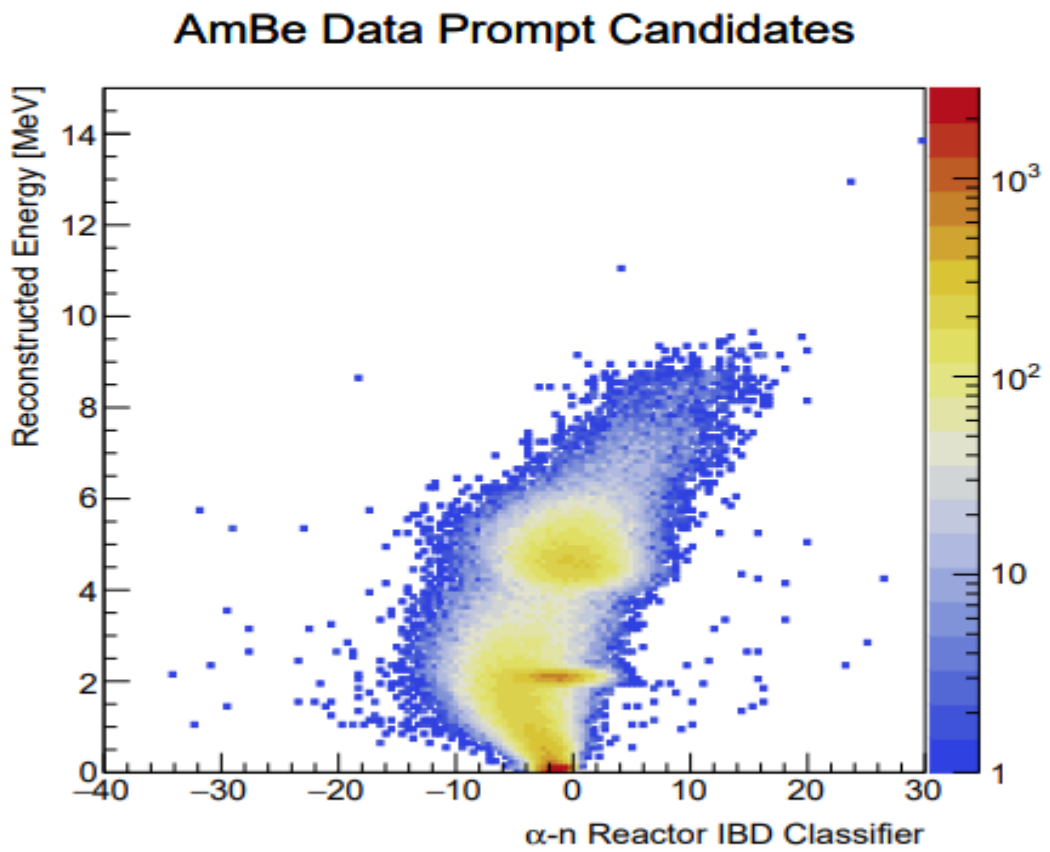
Goal is to be below the limit set by the 1246C-50 standard
80 photos taken of each sample

AmBe cleaning

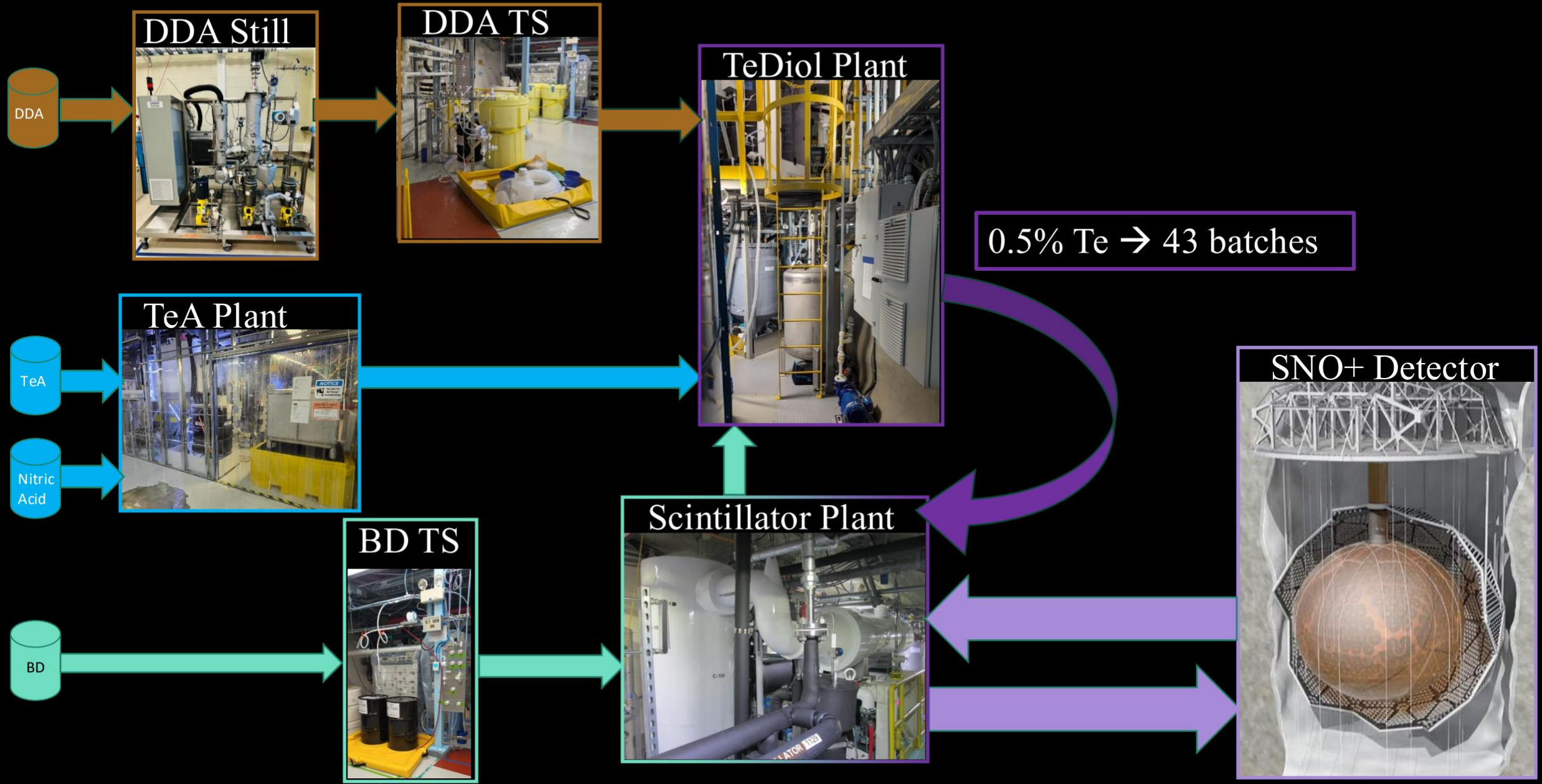


Performance of α-n Classifier



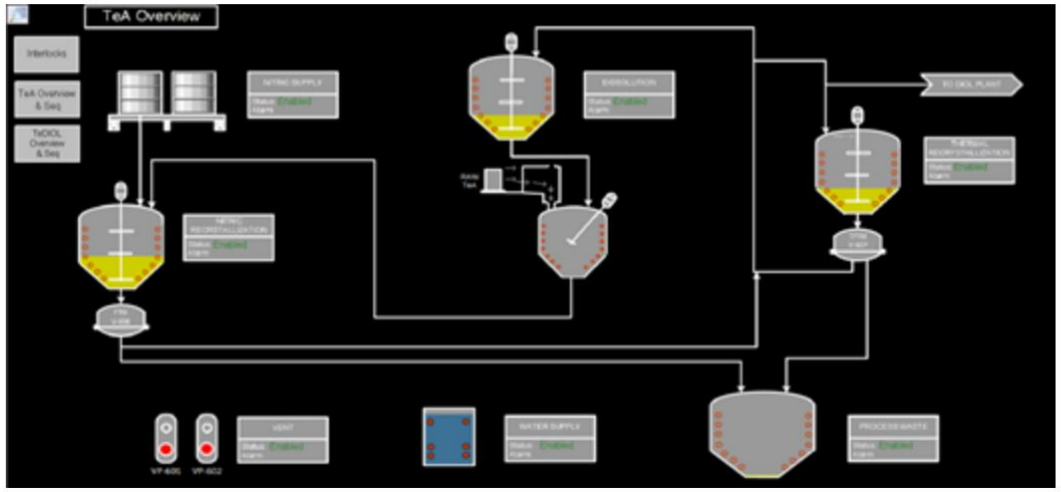


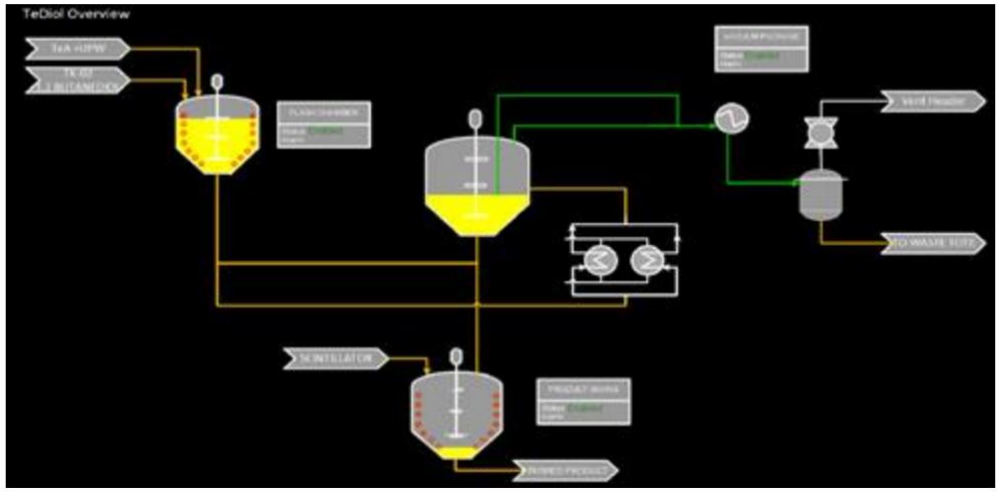
Process overview



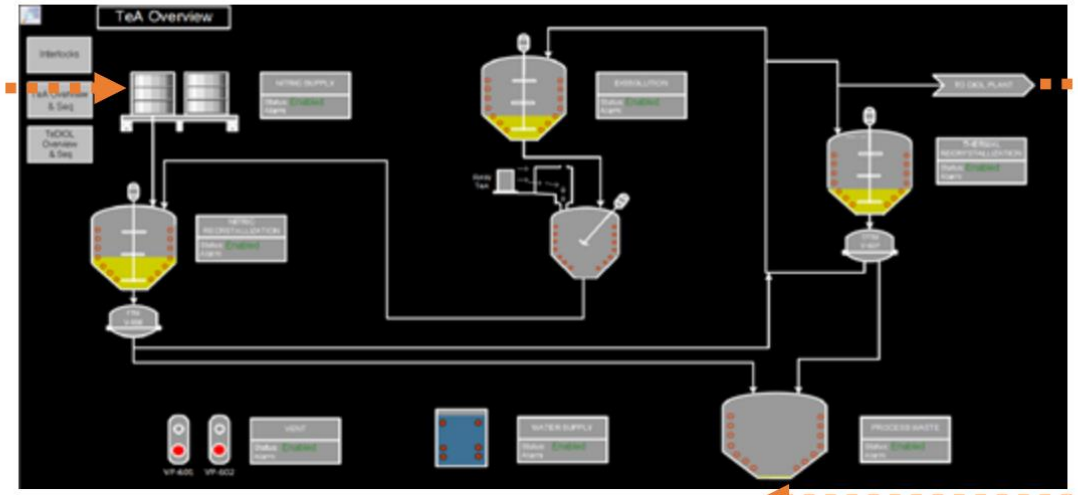
Te Plants Leaching

- The fairly extended PMP allows us to use it for the 2nd leaching phase w/ nitric
  - Enough nitric acid is already underground
  - It would be pumped into the TWO plants and diluted down to 1% concentration
  - The RXT/FTM column will be left with the current solution of TeA
- After the PMP, this will also allow us to evaluate cleanliness of the entire system with ICP-MS





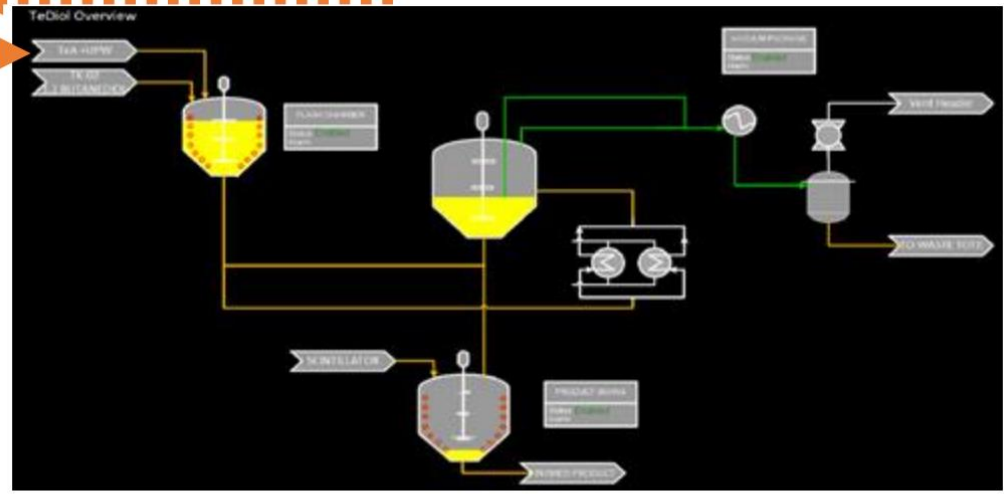
Te Plants Leaching



TeA Plant

1% Nitric

12% Nitric



TeDiol Plant

DDA Still ”Operations Run”

- The week of July 2nd to 11th was focused on continuous processing one full drum (55-G) of Albemarle DDA
- Goal #1 was to test the ‘operations run’ with the most optimal parameters that were established during the ‘commissioning run’ of the still
  - 5 kg/h of feed, 70 C, 20 mTorr, 67% yield
  - With degassing, 1st and 2nd distillation
- Goal #2 was to train as many new operators, QA and spill responders as possible


PVD 75
Kurt J. Lesker
ViewSonic
Corrosive
SNQ
INFORMATION

DDA Still ”Operations Run”

- New team of trained operators, QA and spill responders (Thank you!)
  - BNL (Minfang, Richard, Chris), Shaun, Brad, Matt, Scott, Po-Wei, Steve, Sahima, Lorna, Noah, Emilio