



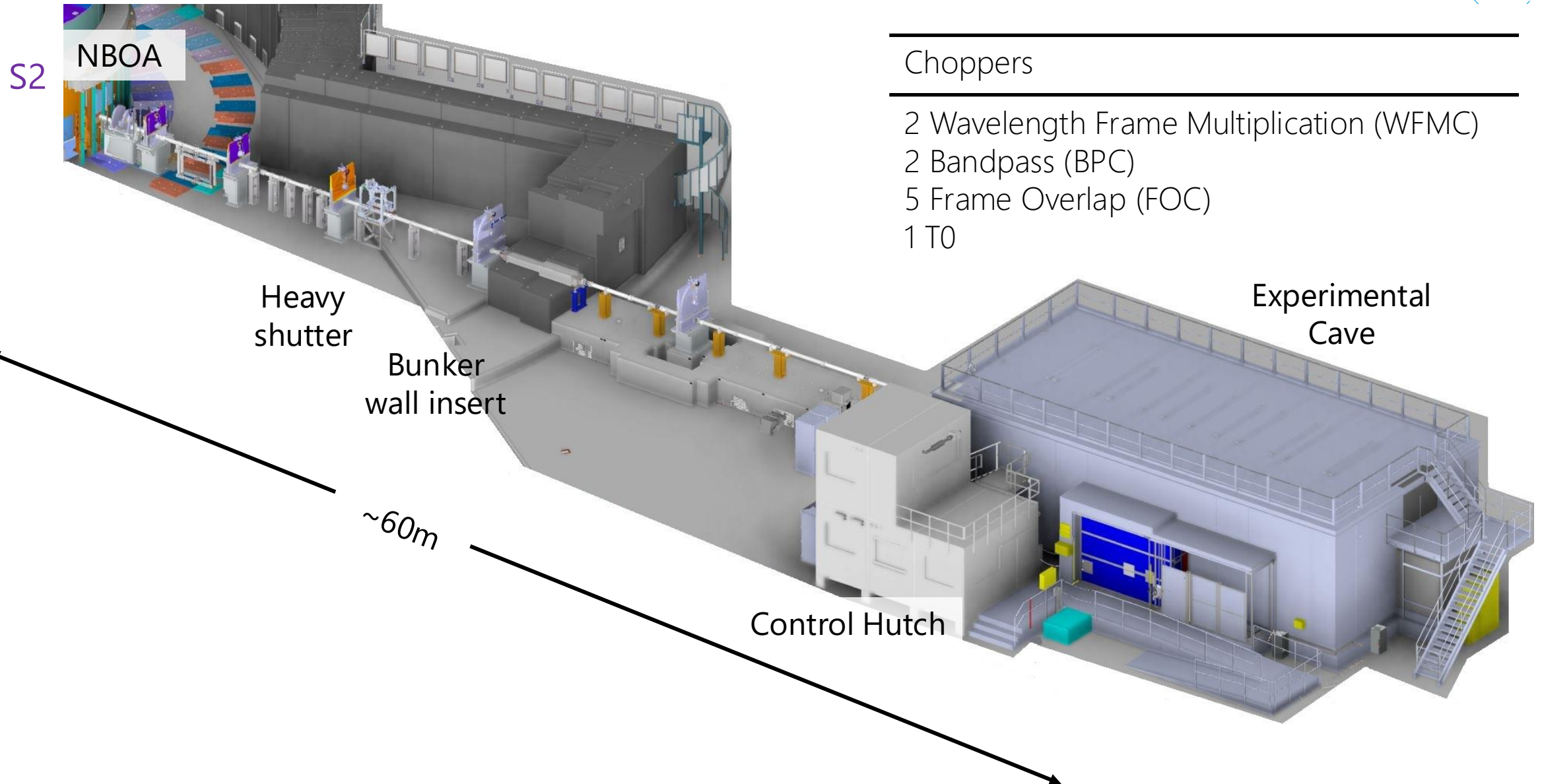
DMSC ODIN Update

PRESENTED BY SØREN SCHMIDT

2026-04-22

ODIN

Layout

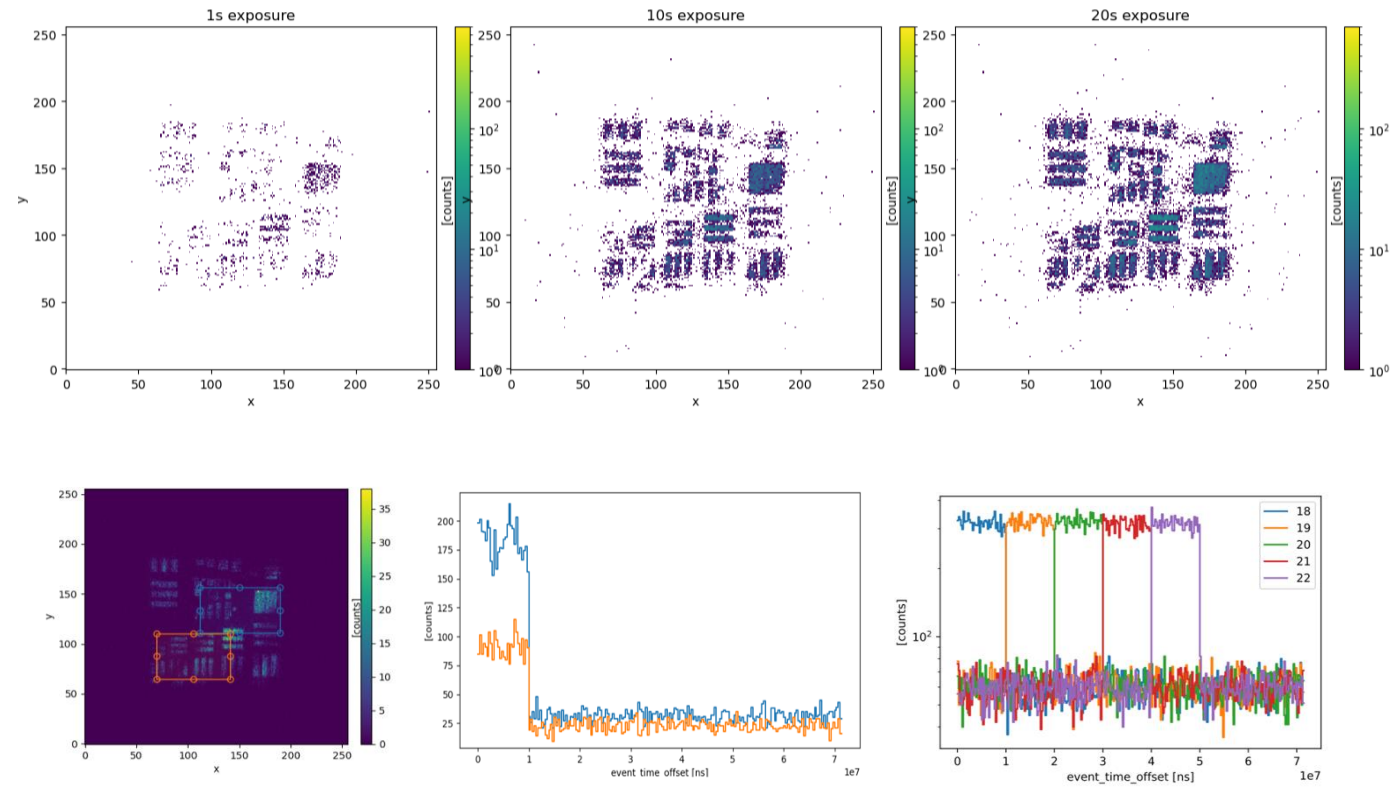
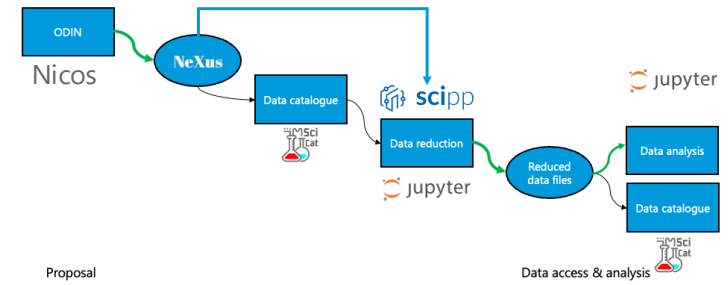


Choppers

- 2 Wavelength Frame Multiplication (WFMC)
- 2 Bandpass (BPC)
- 5 Frame Overlap (FOC)
- 1 TO

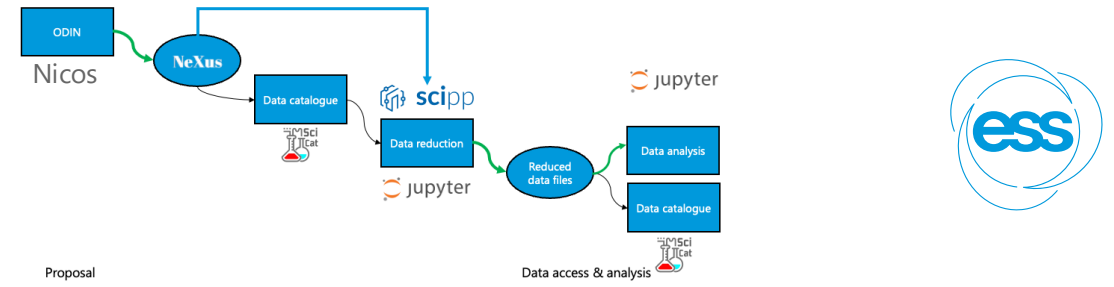
Lumacam

ESS-5849590

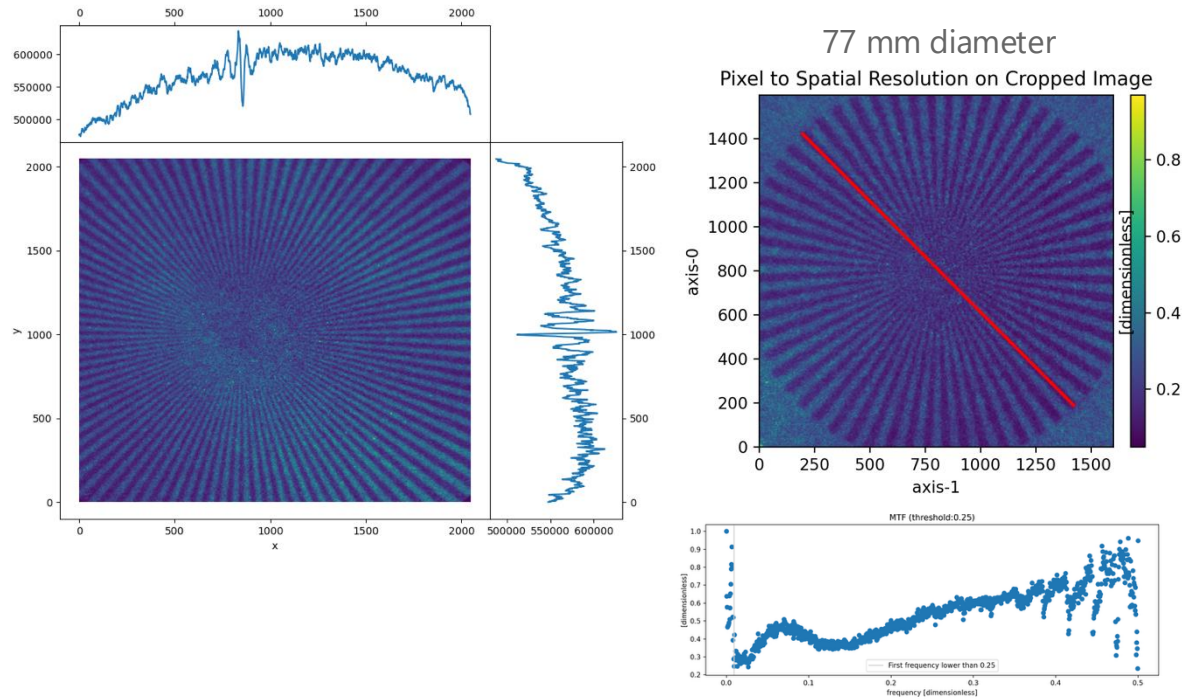


CMOS - ORCA

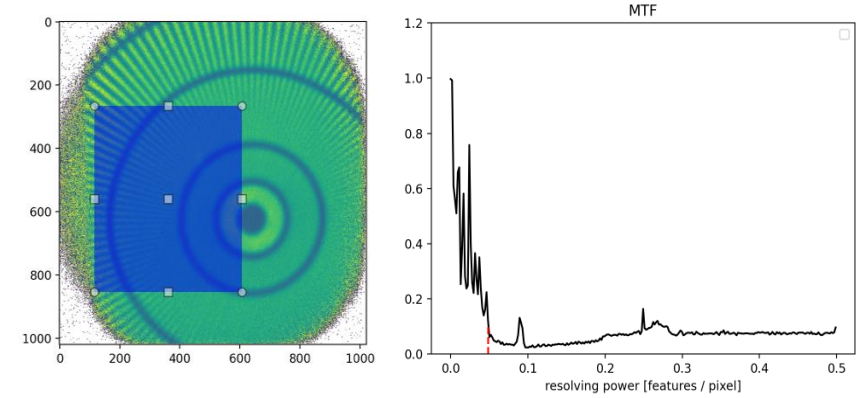
ESS-5849591



ODIN

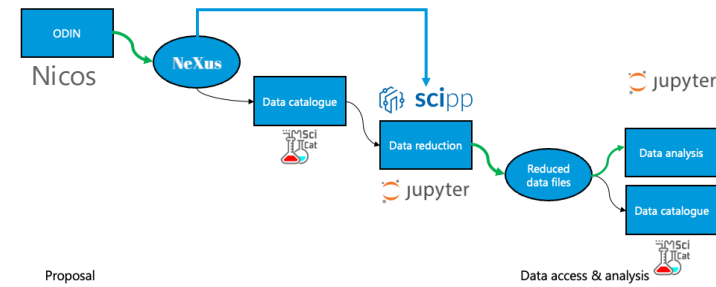


J-PARC SENJU data

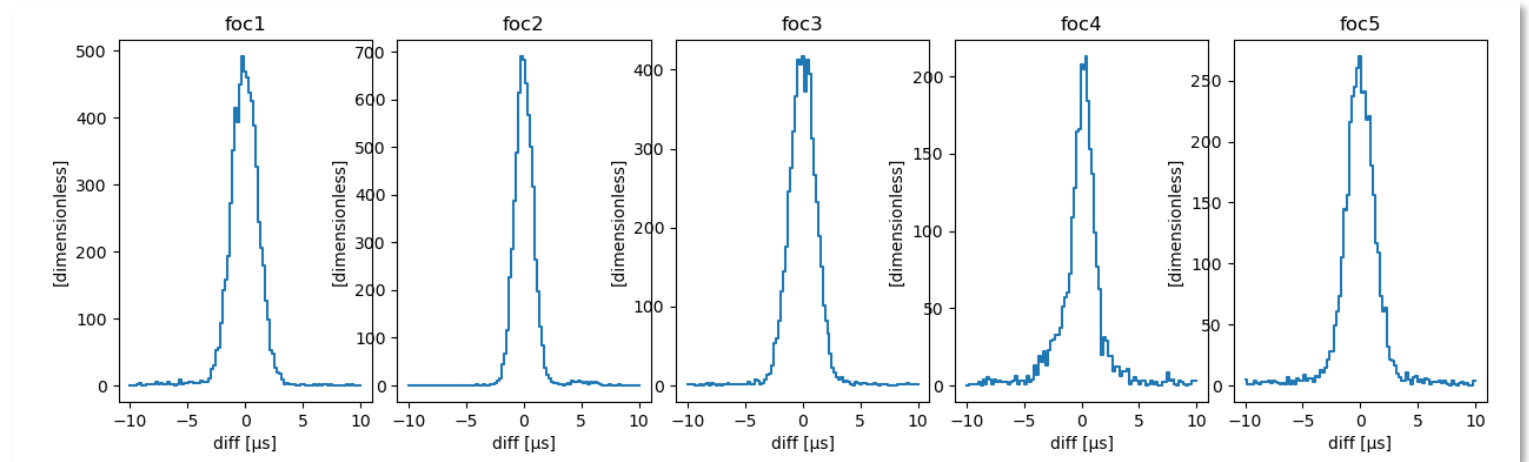
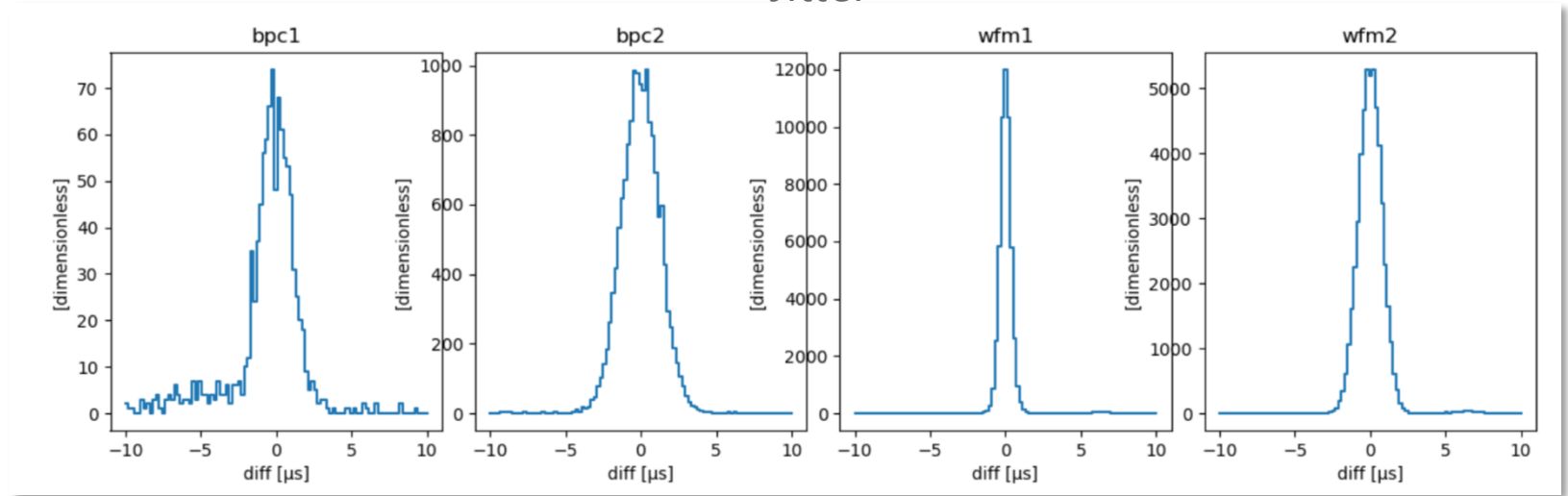
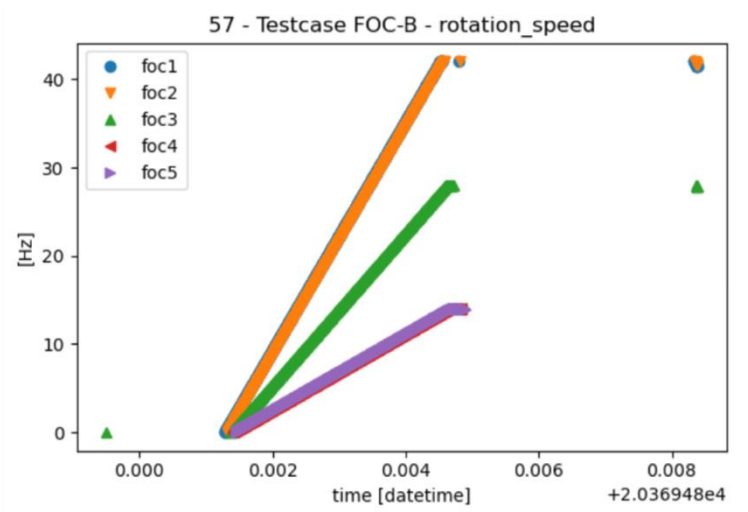


ODIN Choppers

ESS-5849588



Jitter



T0 not yet installed

ODIN MCA & Beam monitors



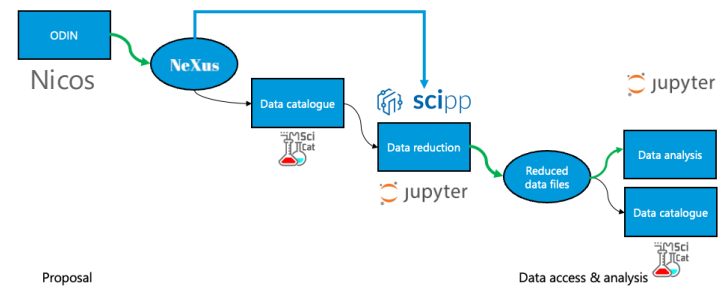
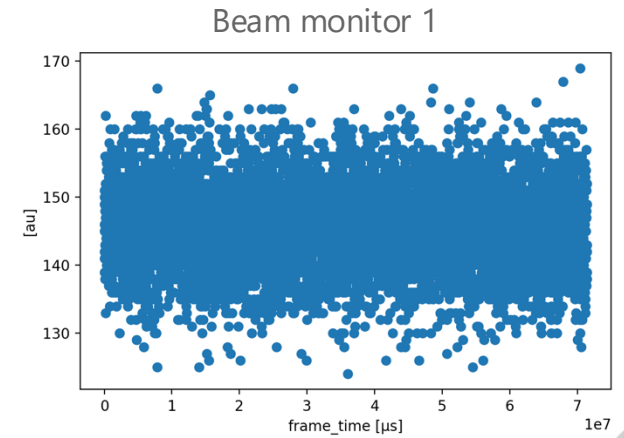
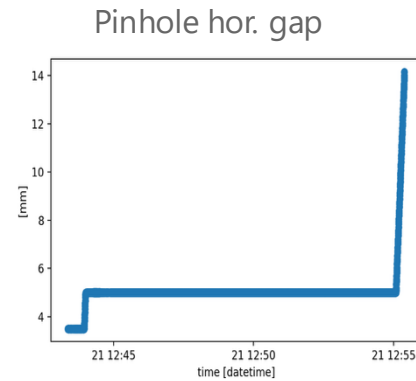
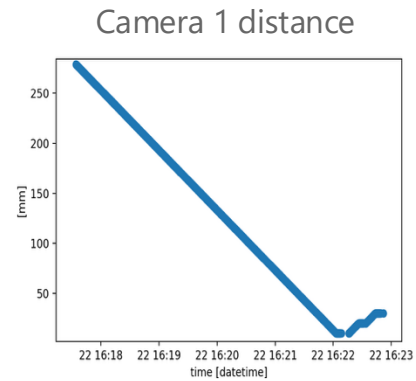
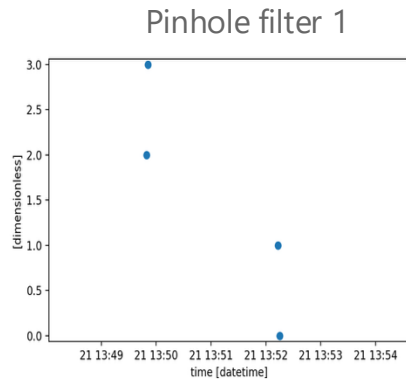
Beam filtering system: ESS-5849592

Sample & Camera Pos. System: ESS-5849575

Beam Geometry Conditioning: ESS-5849593

Beam Monitor: ESS-5820250

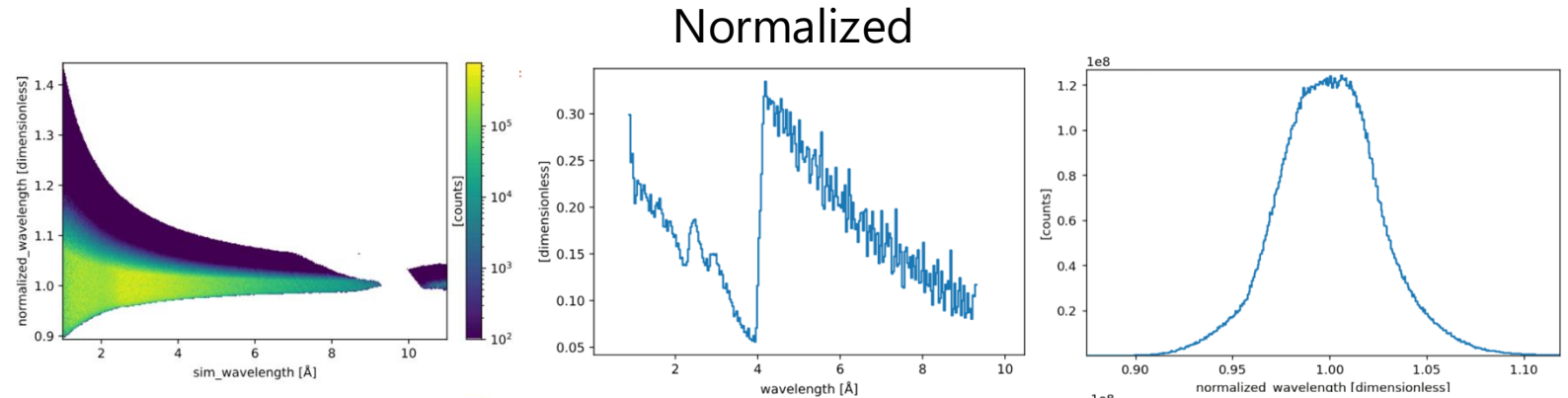
Examples



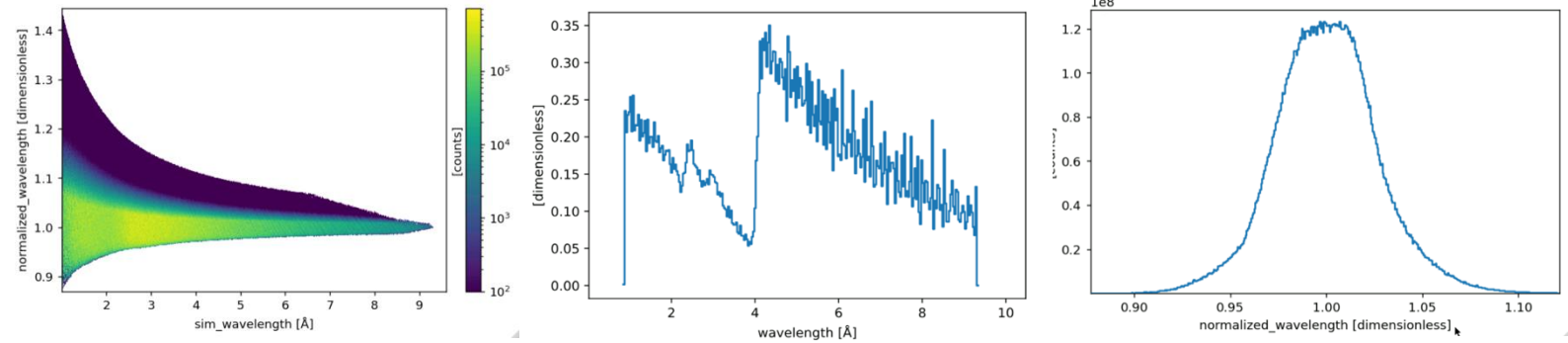
Bragg Edge, Fe, transmission, McStas



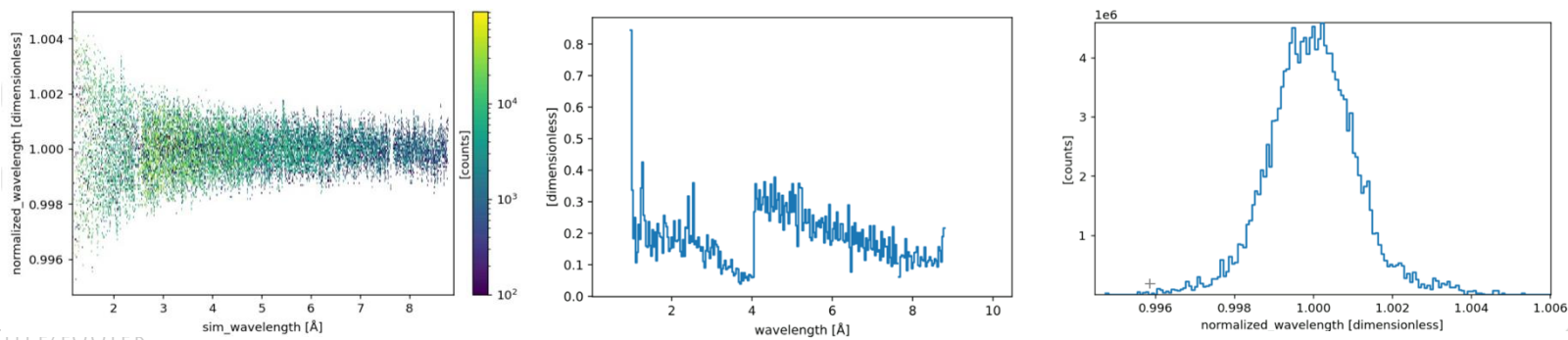
T0



T0+BPC



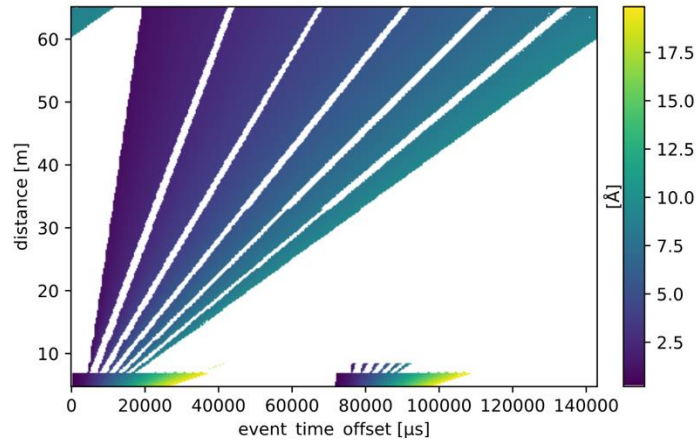
WFM



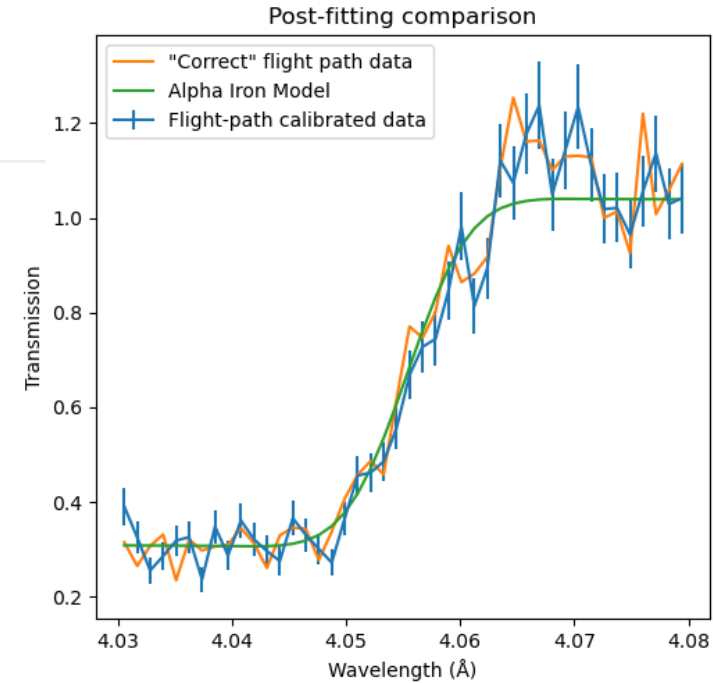
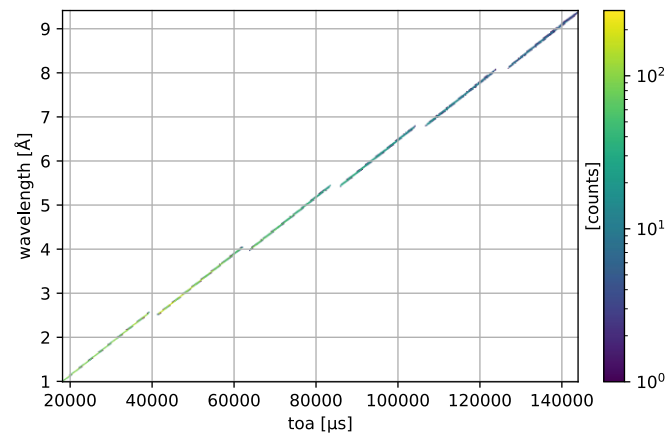
Flightpath calibration with Fe (bcc), WFM



For flightpath calibration



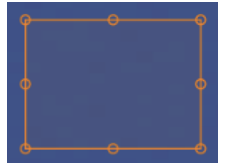
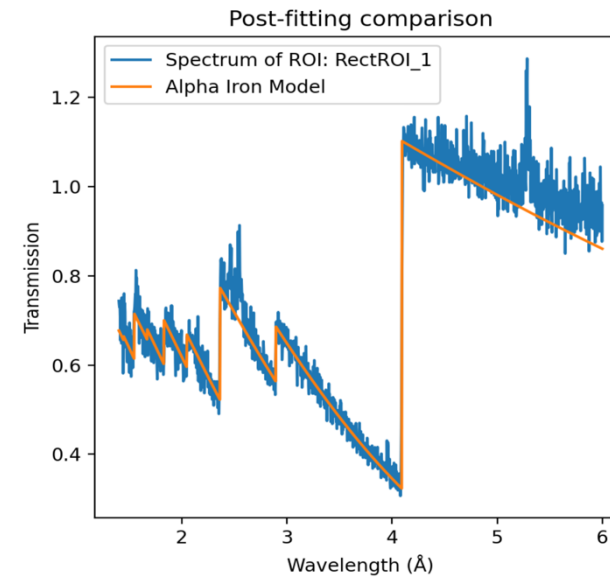
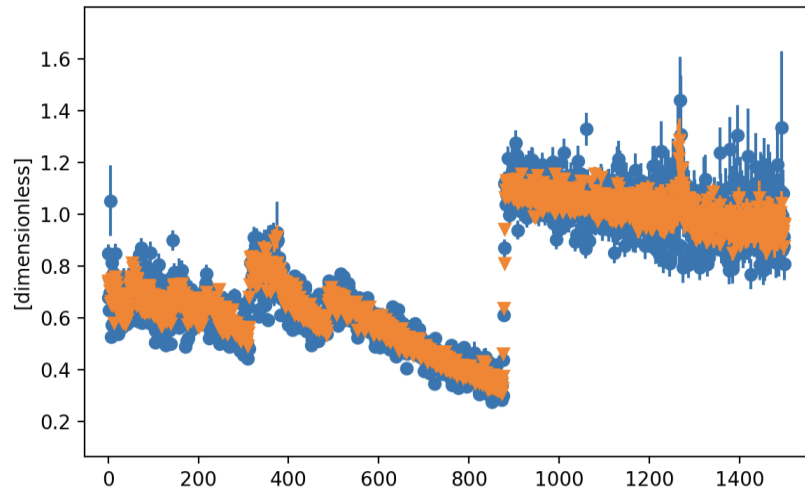
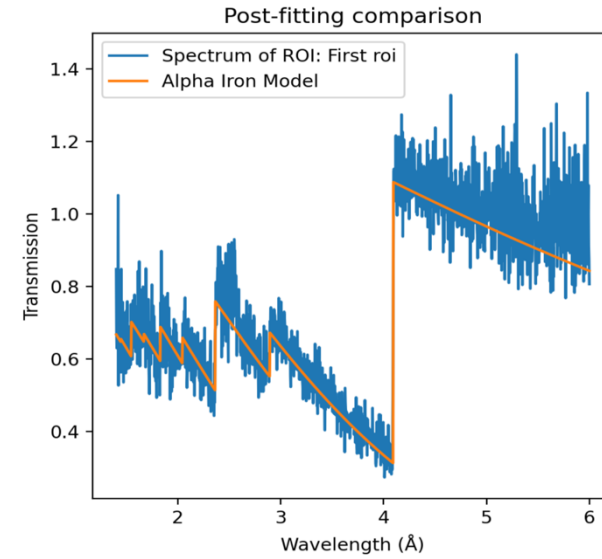
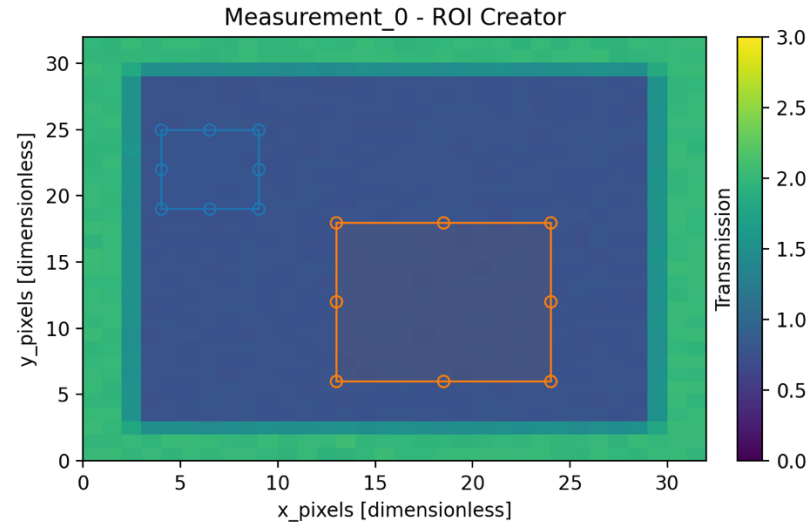
When flightpath calibration is completed



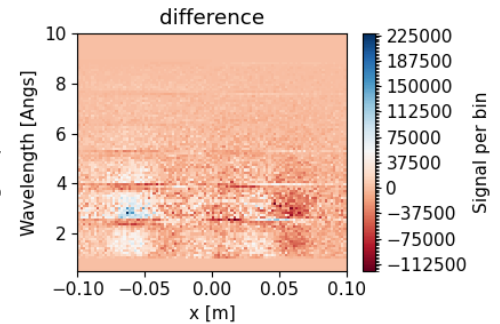
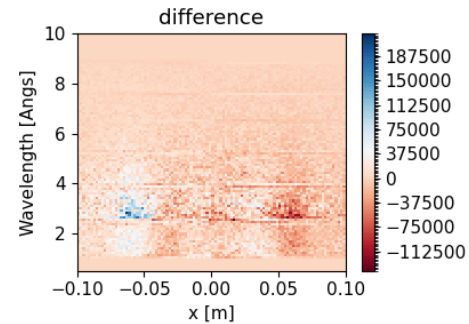
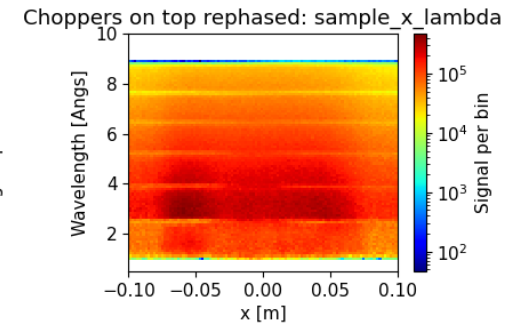
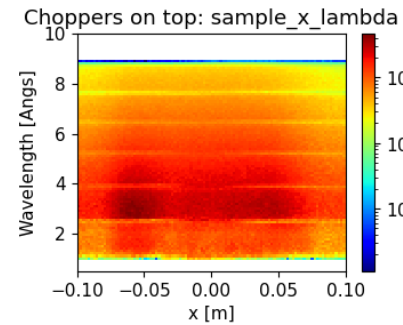
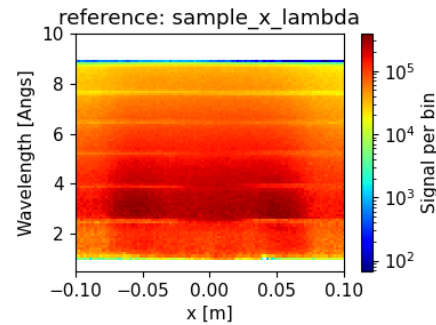
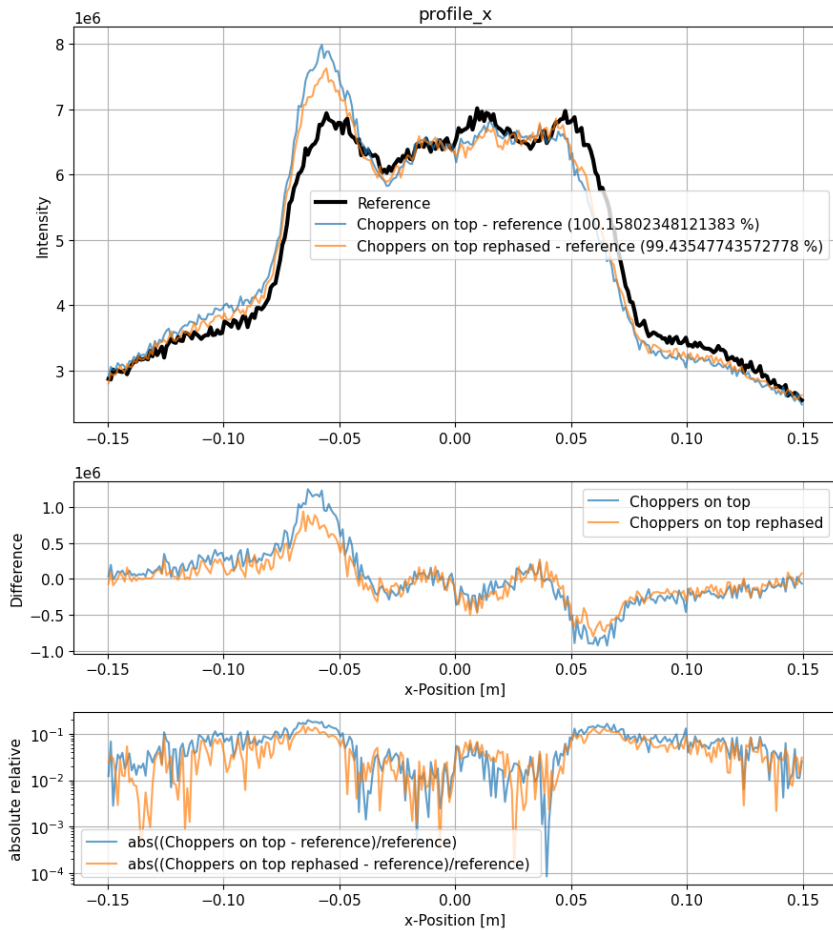
McStas data

Resolution function (wavelength) is also fitted, especially important for T0+BPC (no WFM)

Bragg edge fitting, Fe (bcc), using NCrystal



ODIN McStas chopper settings updated



McStas choppers moved from position below the beam to above the beam

Also

DST:

- SPAM on VISA, improved performance (BLAS related)
- Access to GPU on VISA for DragonFly and CIL is currently being worked on

Next:

- Integrate Core Imaging Library (CIL) as pipeline for tomography reconstruction
- X-ray source at ODIN

Other:

- Gollum system, cameras mounted
- Gratings – FRM-II
- Polarized neutrons: scope has been deferred

- Commissioning: Also run acc. in short pulse mode (perhaps in steps towards long pulse mode)



Thank you for your attention!

2026-04-22