TG5/SAR Meeting
ODIN
Data visualization / reduction software

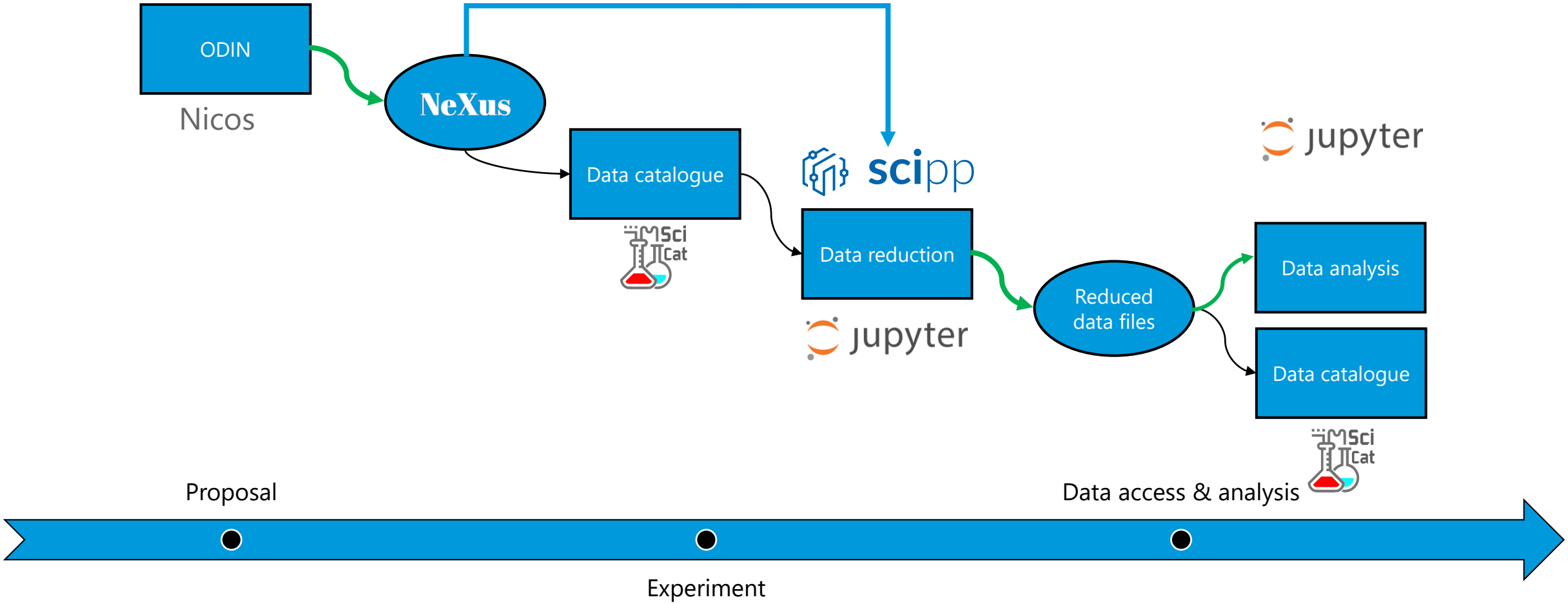
DMSC contribution

PRESENTED BY SØREN SCHMIDT

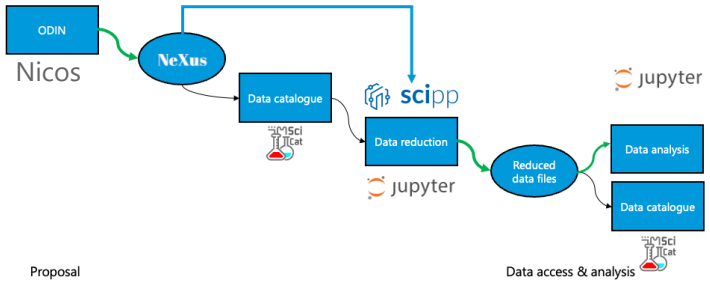
2025-12-17

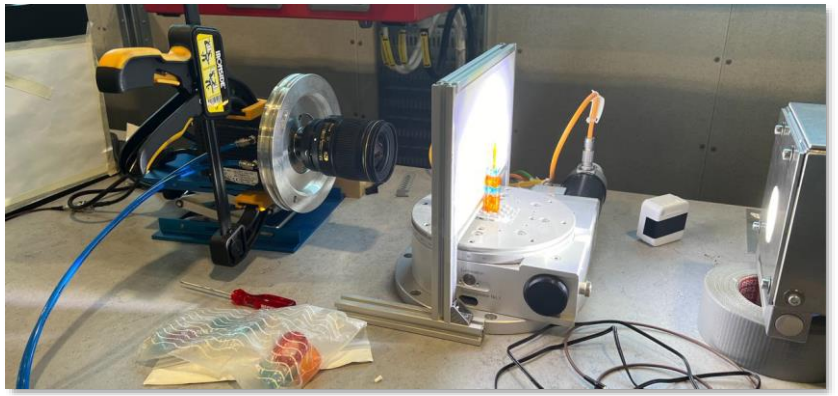
Overview

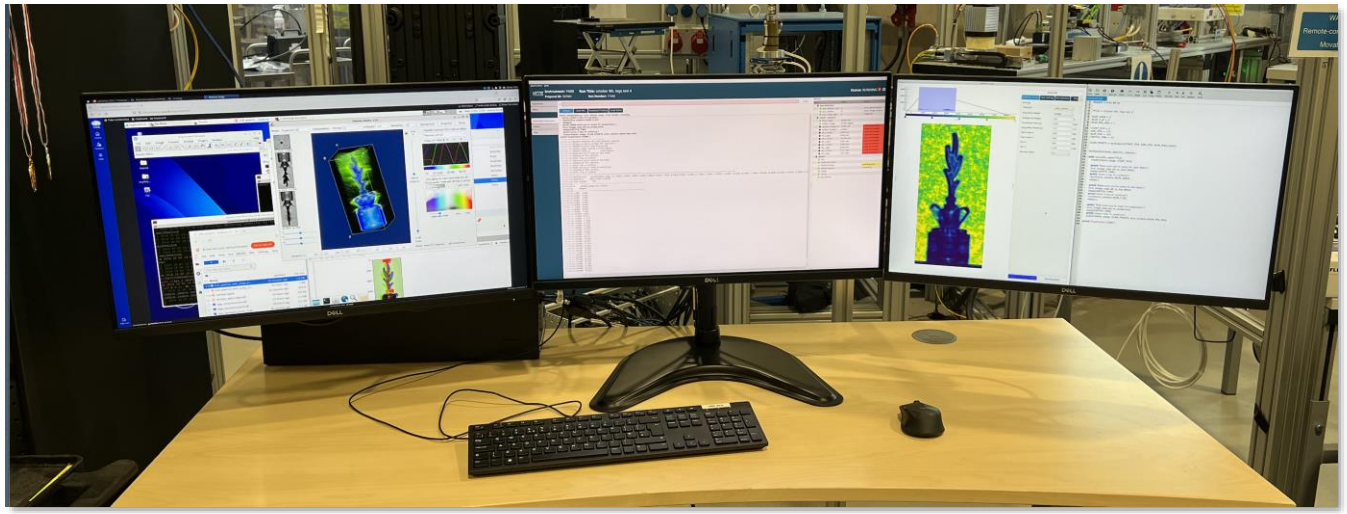
General data pipeline

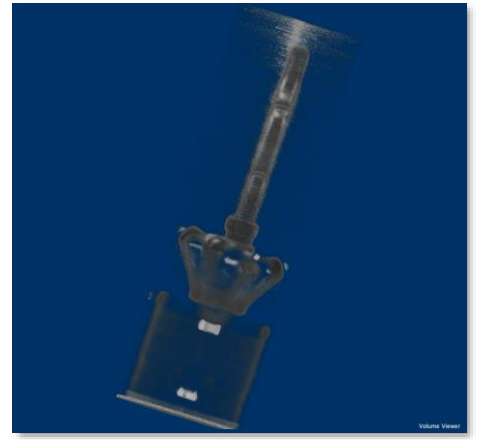


YMIR – Light Tomography on LEGO, Oct 2024







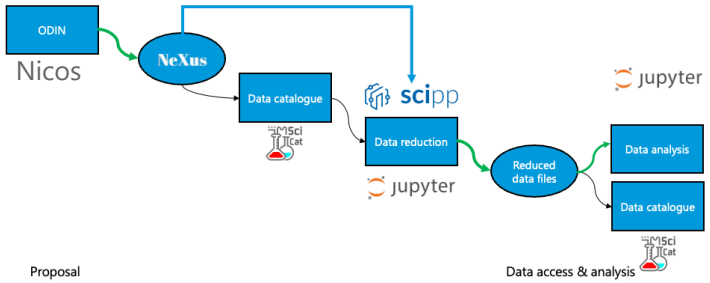


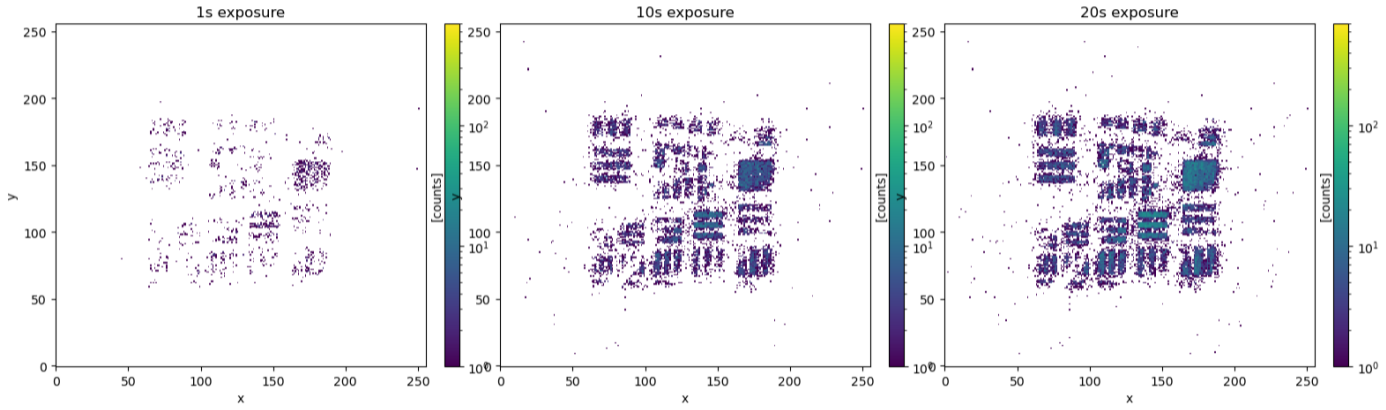
- Data acquisition at YMIR using ORCA & NICOS: OB, DF & Sample
- Data reduction (scipp) & reconstruction in notebook (pymuhrec bindings) on VISA
- Visualization of reconstruction: Fiji (ImageJ) on VISA
- Raw and derived data archived in SciCat

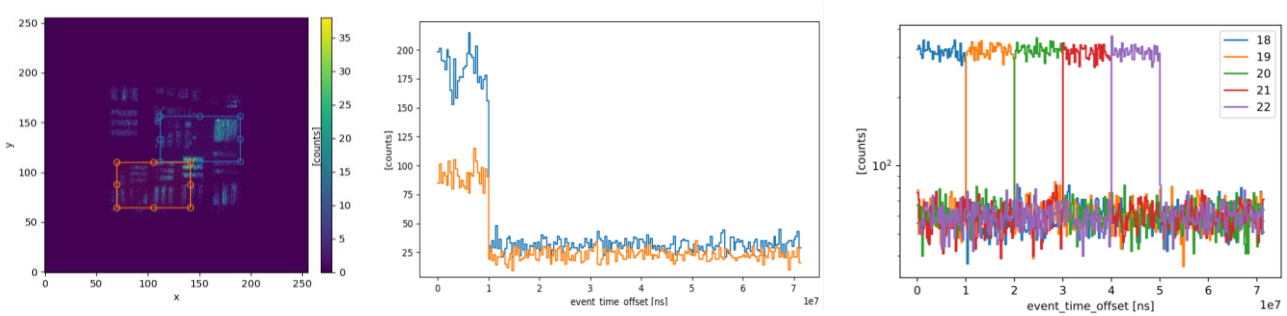
- Data acquired for both step-by-step and continuous sample rotation (automatically handled by scipp)

Lumacam

ESS-5849590





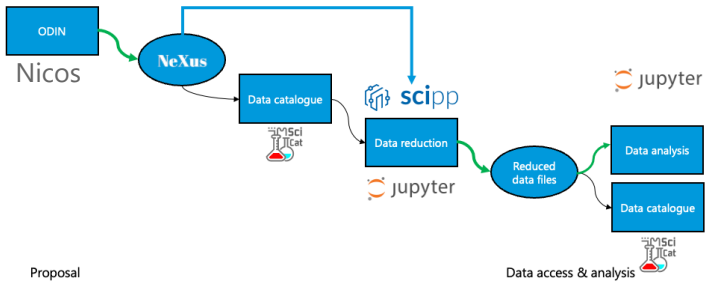


Live View worked with 1s updates

- NIT-501: Allow changing exposure time - resolved
- NIT-502: Normalize with open beam – in progress

CMOS - ORCA

ESS-5849591



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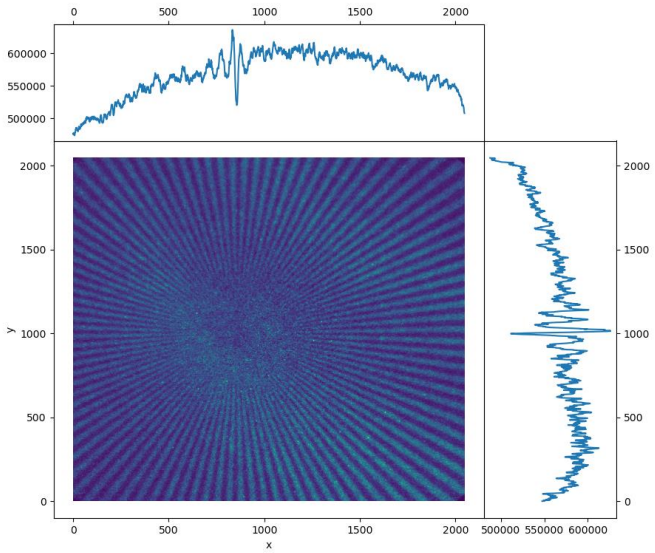
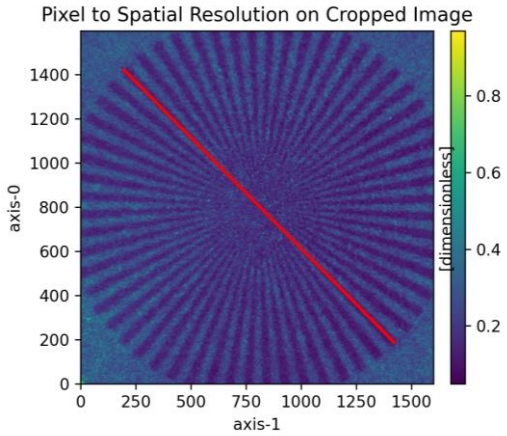
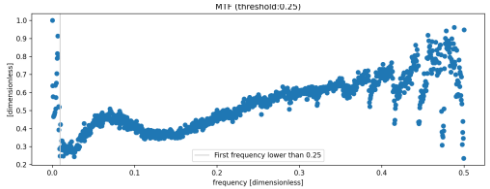


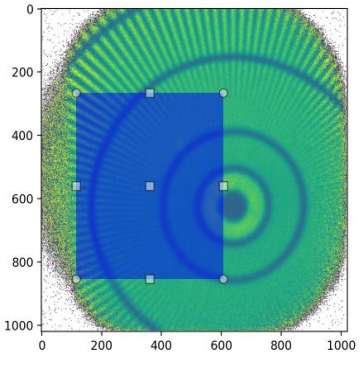
77 mm diameter

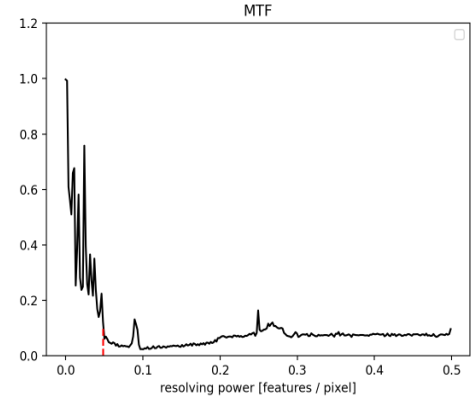




Resolution: 5 mm

J-PARC SENJU data

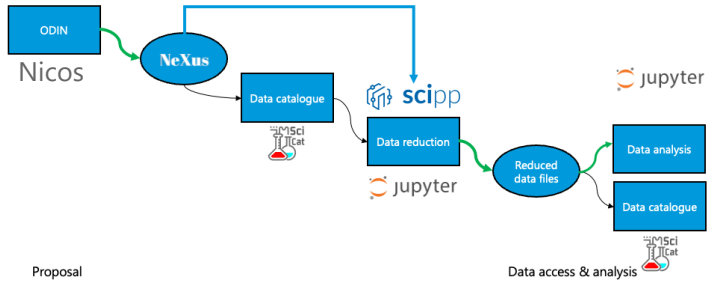


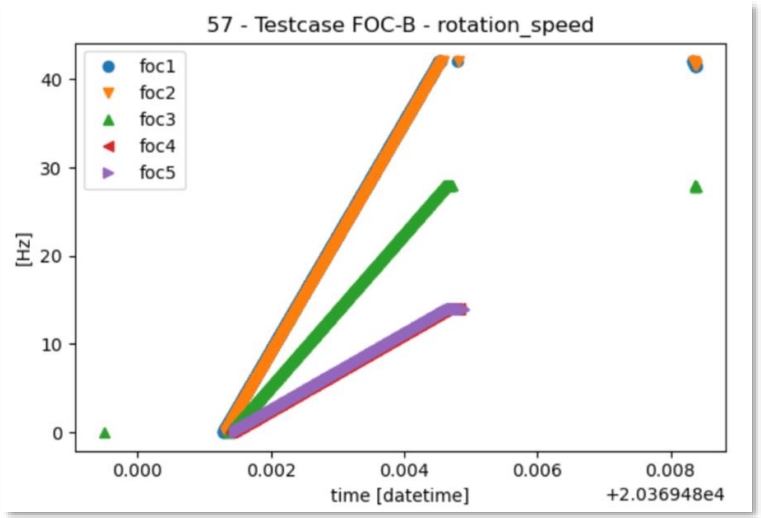


- NIT-558: Live view, intermittent issues - resolved
- NIT-559: Redo resolution with physical siemens star – in progress
- NIT-503: Effective pixel size – decide place for meta data

ODIN Choppers

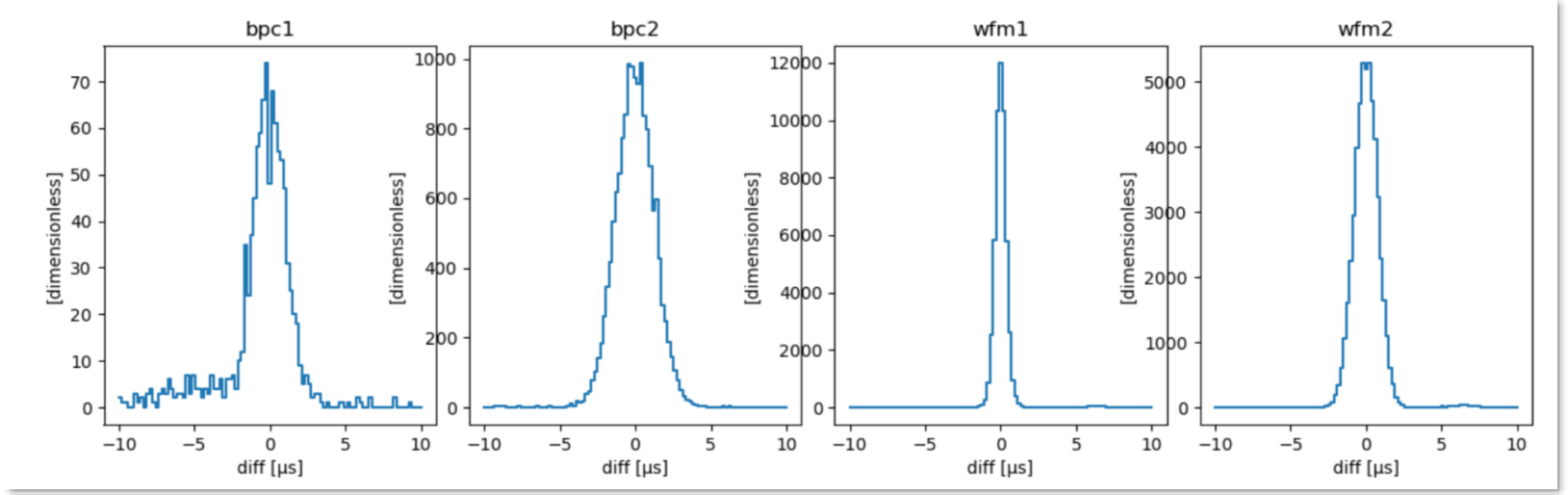
ESS-5849588

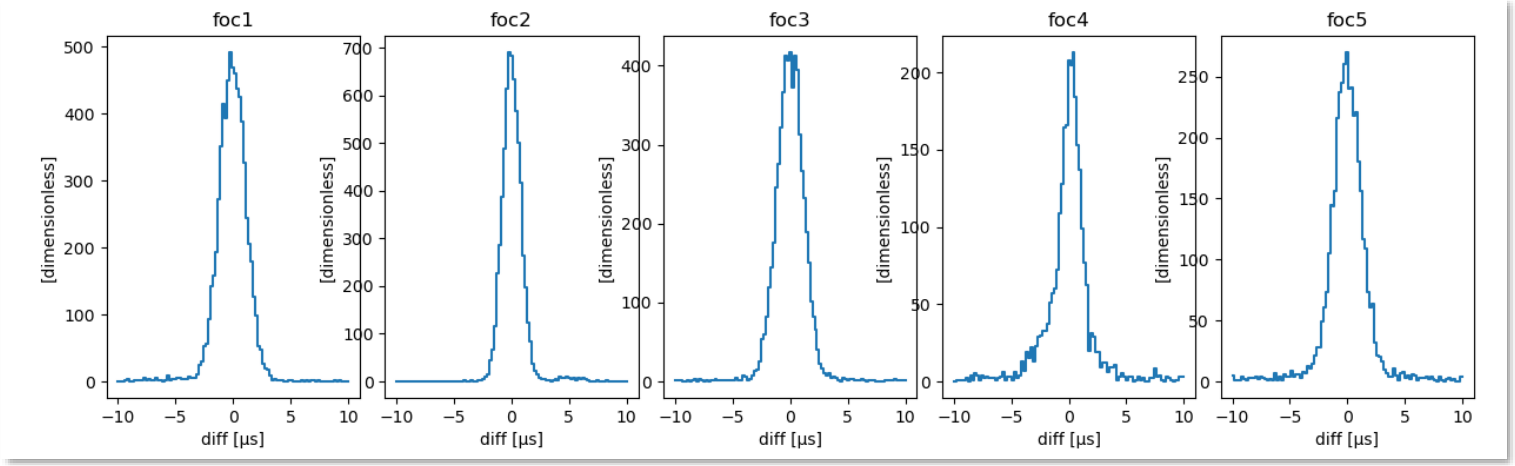




T0 not yet installed

Jitter





ODIN MCA & Beam monitors

Beam filtering system: ESS-5849592

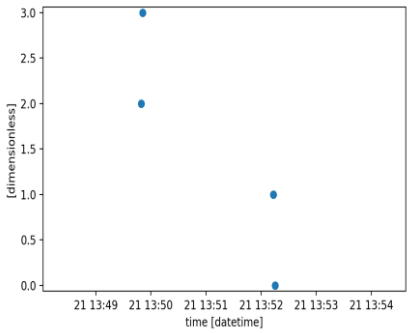
Sample & Camera Pos. System: ESS-5849575

Beam Geometry Conditioning: ESS-5849593

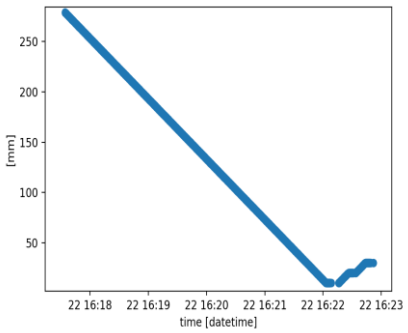
Beam Monitor: ESS-5820250

Examples

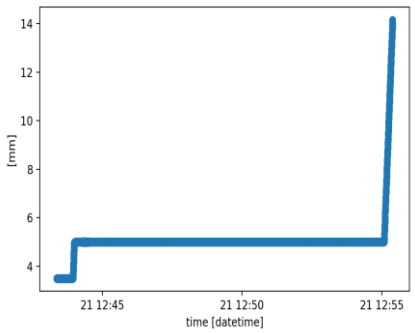
Pinhole filter 1



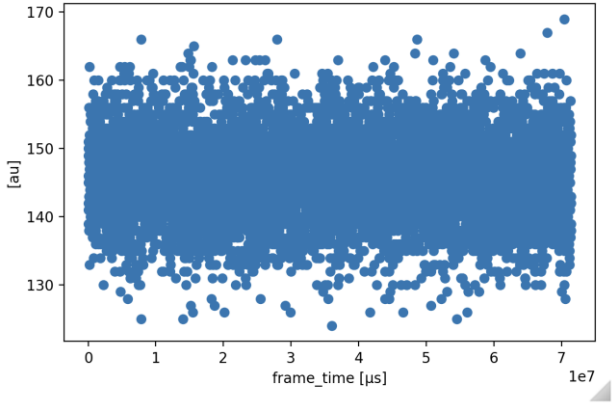
Camera 1 distance

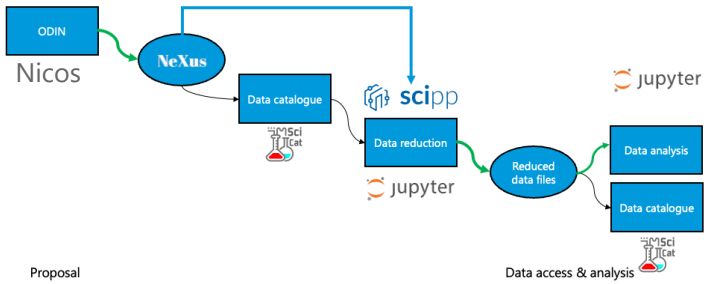


Pinhole hor. gap



Beam monitor 1





Summary

ODIN

- Data from detectors (Lumacam & ORCA), Choppers, MCA and Beam monitors were successfully tested and could be controlled from NICOS
- Uploading derived data to ScicCat worked
- Identified 5 NITs to be completed by TG6 (two have been resolved)

Thank you for your attention!

2025-12-17