aXis2000 analysis of NanoMAX data
For **diode SPECTRA** (early measurements using diode detector)
use Read.Spectra.nanomax ➔ calls *read_nanomax_spectra*

Single IMAGES in the **raw** folder diode format differs from those in the **process** folder,
Files (*****.h5) in the **notebooks** folder include reconstructed ptyco-amp, ptycho-phase and stxm all measured using Eiger
Eiger use Read.Image.nanomax ➔ calls *read_nanomax_image*

STACKS (called 'energy_series' at NanoMAX)
Two stacks were recorded using the diode detector (read in but code not in aXis2000). For diode stacks use Read.Stacks.nanomax.diode
➔ calls *read_nanomax_image*

For **stacks (energy_series)** recorded with **Eiger** (series00, series 007) use Read.Stacks.nanomax.eiger ➔ calls *read_nanomax_stack*
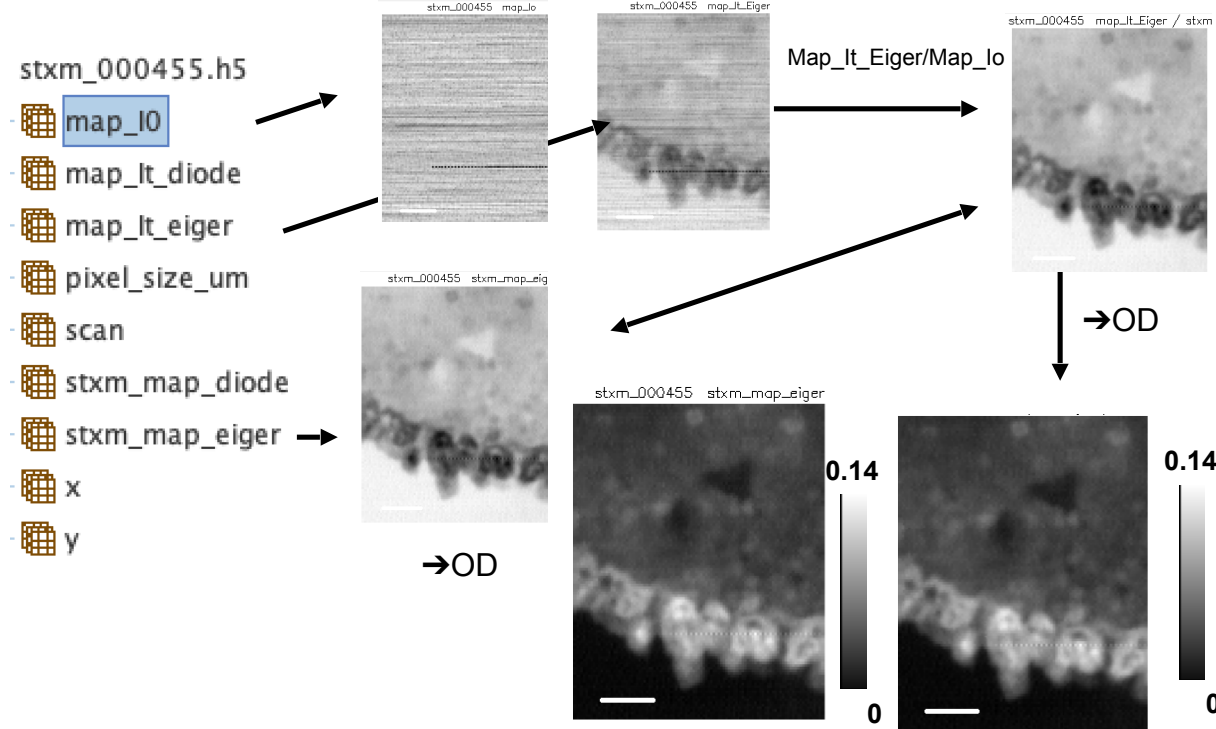
NB: The h5 entries labelled stxm_map_XXX (XXX = Eiger or Diode are
    S = *ln(map_ XXX/map_Io)*
   In order to get correct OD, it is necessary to undo the ln() by
    executing exp(S) prior to selecting an Io area and converting to OD

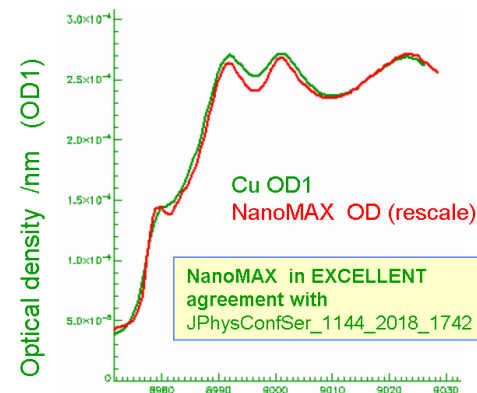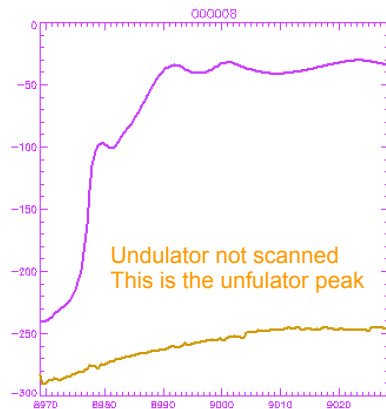**Data:** Y:\data-XRM\NanoMAX\2024\24-03\process\
0007_CZ138\scan_000455\stxm\000455.h5

h5 files in Process area

stxm_000455.h5

- map_I0
- map_It_diode
- map_It_eiger
- pixel_size_um
- scan
- stxm_map_diode
- stxm_map_eiger
- x
- y

stxm_000455 map_Io

stxm_000455 map_It_Eiger

Map_It_Eiger/Map_Io

stxm_000455 map_It_Eiger / stxm

→OD

stxm_000455 stxm_map_eig

→OD

stxm_000455 stxm_map_eiger

0.14

0

0.14

0

Spectrum in *Raw* example

Data: Y:\data-XRM\NanoMAX\2024\24-03\raw\
0002_Cu_refence_foil**000008.h5** = Cu-foil   **000010.h5** = no foil (Io)

000008

Undulator not scanned
This is the unfulator peak

Optical density /nm (OD1)

Cu OD1
NanoMAX OD (rescale)

NanoMAX in EXCELLENT agreement with
JPhysConfSer_1144_2018_1742

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Reading in Stacks (Energy_series)

Read~Stacks~Nanomax~Eiger

get_text

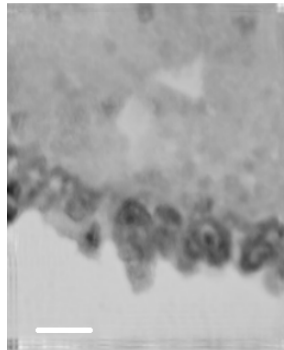ptycho_<A>mplitude, ptycho_<P>hase, <R>aw STXM&Io, <S>TXM_Eiger
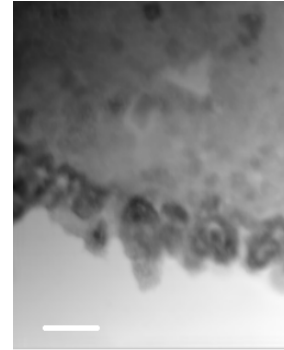
S

average all energies

STXM

ptycho-AMPLITUDE

ptycho-PHASE

0007_CZ138_stxm: average: 8969

aligned

Aligned, truncated

Aligned, truncated

series7_STXM_j : average: 8969.0