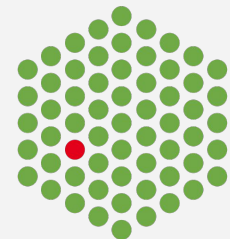


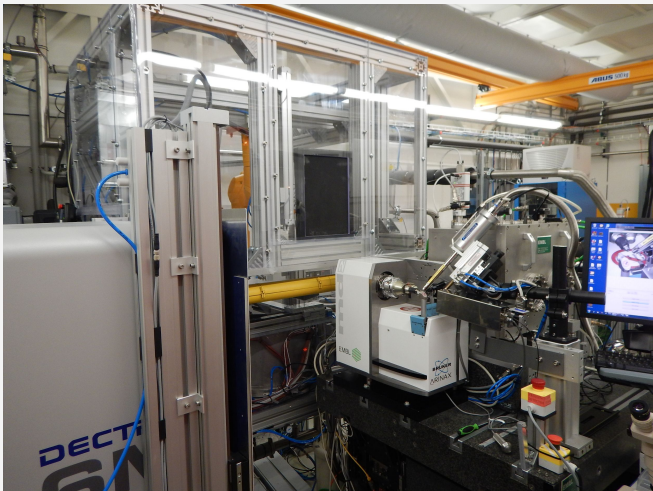
MXCuBE status report

Ivars Karpičs (EMBL Hamburg)

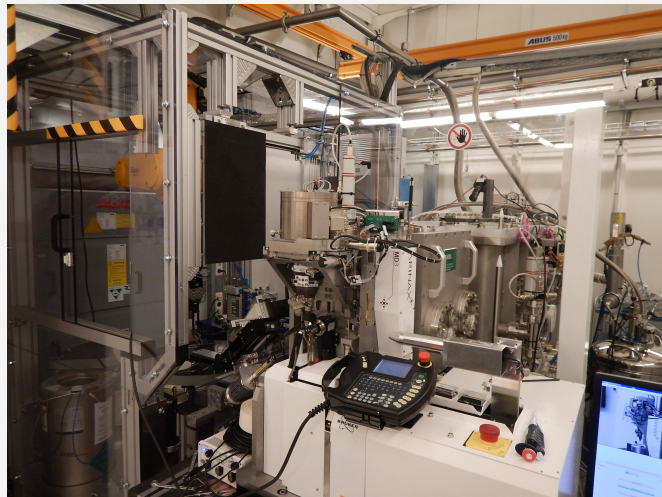
EMBL



MX beamlines P13, P14

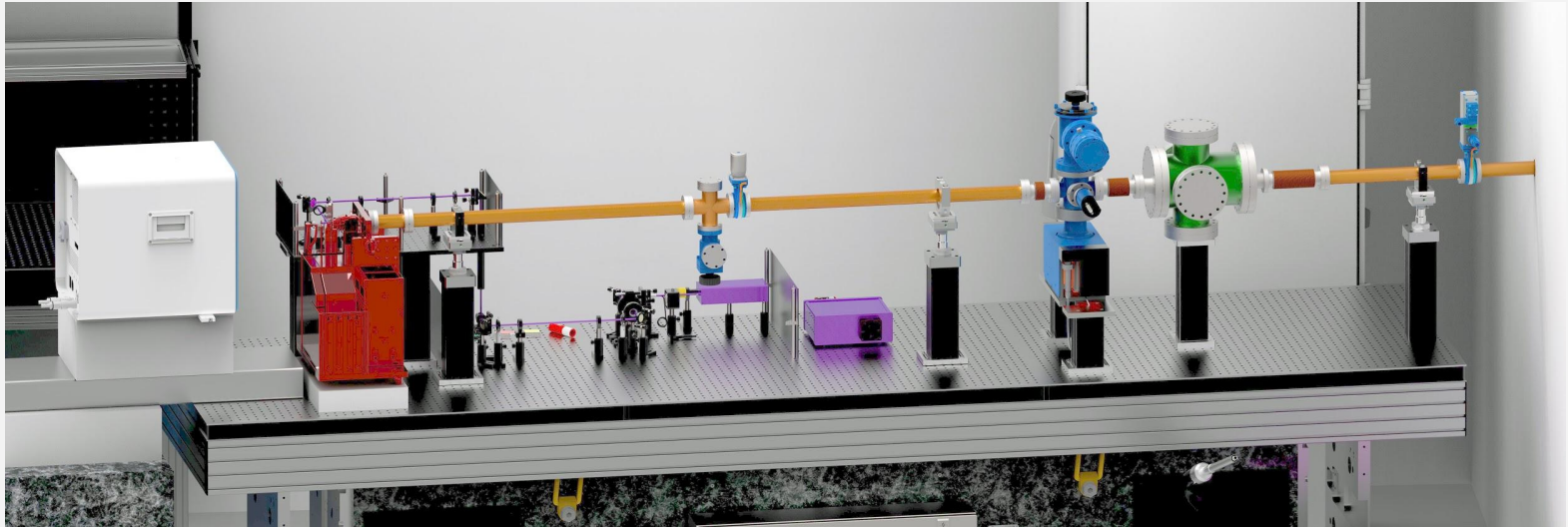


- Variable beam size and high flux
- Tunable energy between 4.5 and 17.5 KeV
- MD2 diffractometer and Pilatus6MF
- EMBL Marvin sample changer with 16 pucks



- Micro-beam conditions with 5 x 5 micron beam
- On the fly changeable focusing of the beam
- Tunable energy and CRLs (ESRF/CINEL)
- MD3 diffractometer and Eiger16M
- EMBL Marvin sample changer with 16 pucks
- Plate scanning possibilities

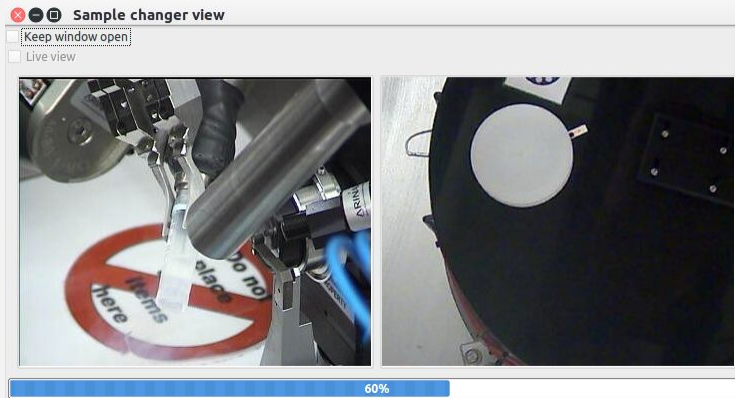
P14eh2 for Time Resolved SSX



- In collaboration with Prof. Arwen Pearson (University of Hamburg).
- Arinax beam shaping unit (MD without a goniostat), CRLs, Eiger4M or Pilatus2M.
- MXCuBE as the experimental control GUI.
- Open for users.

MXCuBE status

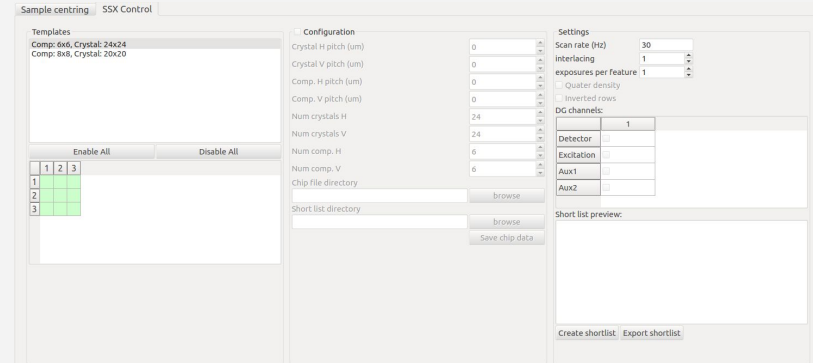
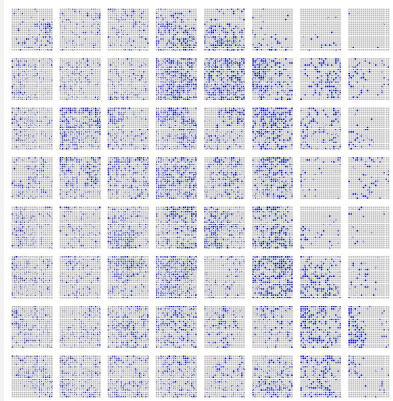
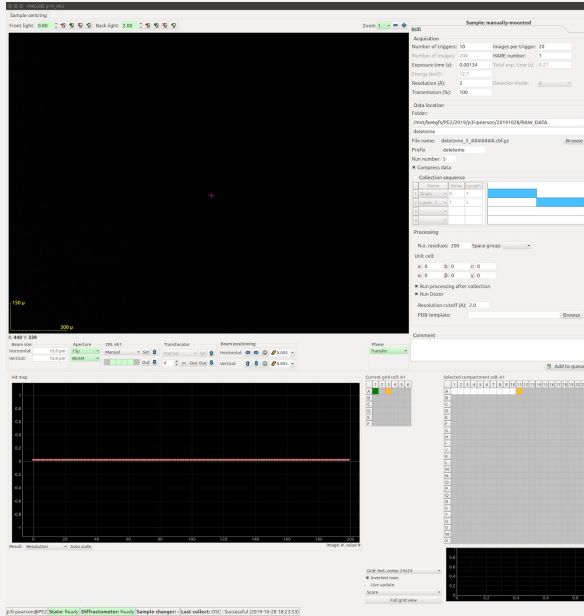
- New window to display sample changer during the sample (un)mount.
- Flux measurements saved in a new TINE flux server (written by M. Nikolova):
 - Updated after starting MXCuBE.
 - Value is invalidated if the beamline conditions (machine current, energy, etc) change.



Machine current	100.4 mA
Machine state	Studien 6.08 GeV, 40 Bunches
Front End, undulator gap	Opened, 10 mm
Hutch temperature and humidity	23.2 C, 27.9 %
Measured / Estimated flux	
Flux	: 4.74E+12 ph/s / 4.74E+12 ph/s
Transmission	: 100% / 100%
Beam size	: 100x101 / 100x101
Cryoject in place	In place
Sample changer	Low level alarm!

MXCuBE for SSX

- Real time feedback describing data quality (spot count, dozor score, etc).
- Tools to define chip geometry and acquisition sequence.



Short term plans

- Move to Python3 and Qt5 in the first quarter of 2020.
- Test latest changes in HWR at the beamline.
- Deployment and testing of the new beamline object may take some time.

Thank you for your attention!

Acknowledgments:

- T. Schneider group: G. Bourenkov, T. Schneider, and others.
- S. Fiedler group: M. Nikolova, M. Bueno, U. Ristau, and others.
- EMBL Grenoble: J. Sinoir, and others.
- MXCuBE community.