Status of the MX Beamlines at BESSY II

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on behalf of the HZB-MX group

ISPyB/MXCuBE Joint Meeting, 20.11.-22.11.2024,
Hybrid Meeting, Sincrotrone Trieste

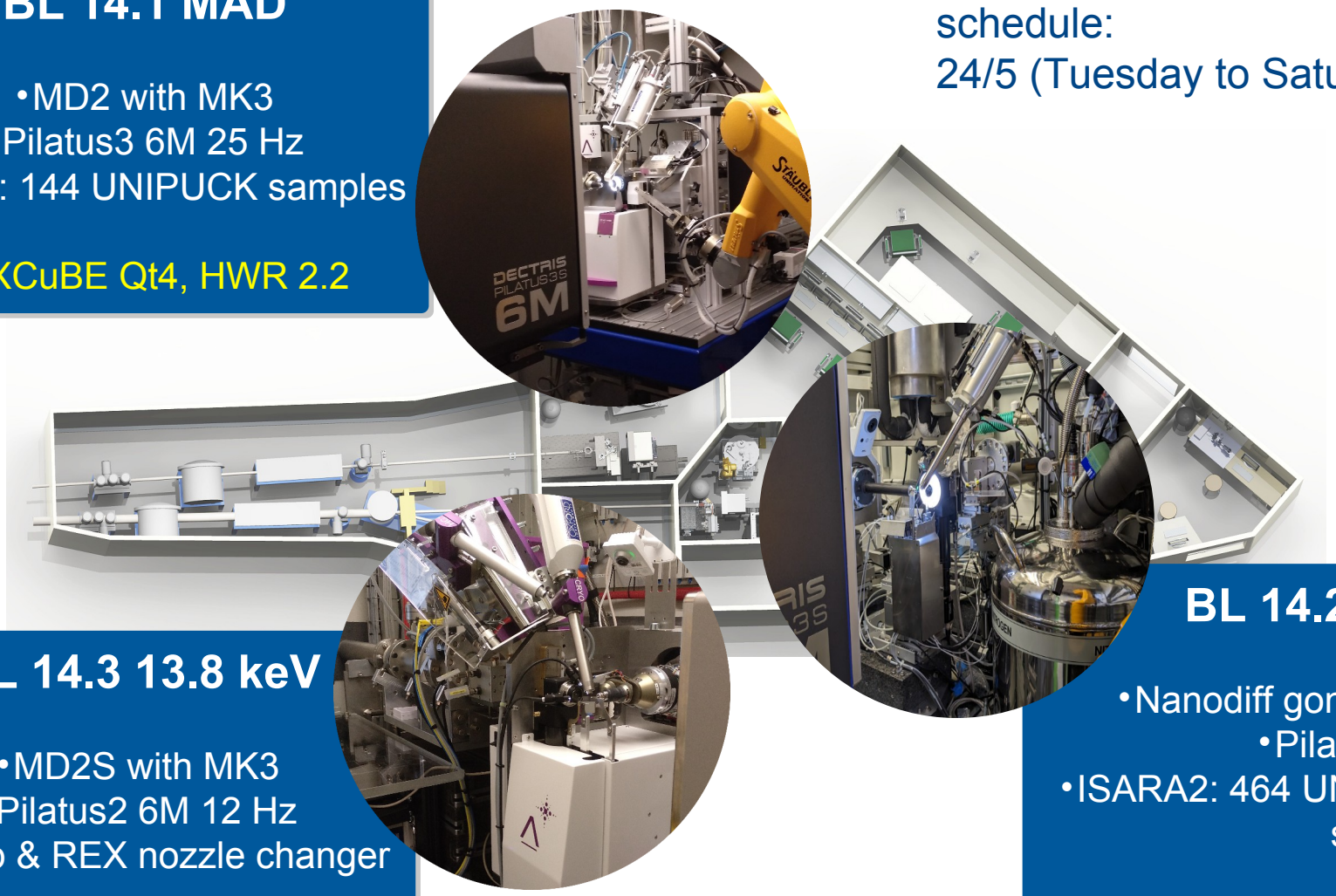
MX experimental floor at BESSY II

BL 14.1 MAD

- MD2 with MK3
- Pilatus3 6M 25 Hz
- CATS: 144 UNIPUCK samples

- MXCuBE Qt4, HWR 2.2

- standard user operation schedule:
  24/5 (Tuesday to Saturday)



BL 14.3 13.8 keV

- MD2S with MK3
- Pilatus2 6M 12 Hz
- HClab & REX nozzle changer

- MXCuBE Qt4, HWR 2.2

BL 14.2 MAD

- Nanodiff goniometer
- Pilatus3 2M
- ISARA2: 464 UNIPUCK samples

- MXCuBE Qt4, HWR 2.2

MX@BESSY status

- post-cyberattack IT infrastructure works
  - network reconfiguration
    - isolated control-system/beamline network
    - colocation network for server infrastructure (office & beamline access)
  - migration of beamline and MX file systems to new SAN storage device (Huawei Dorado)
  - replacement of MX server infrastructure
  - restart of CommVault enterprise backup for MX

- remote-access restart
  - Nomachine NX with 2FA and specific RA credentials (HZB userapp)
  - friendly users in week 46
  - regular RA operation starting week 50

- BL14.1: pink beam upgrade specified and funded
  - replacement of DCM with DMM monochromator
  - delivery and installation of DMM chamber and mirrors planned Q3/2025
  - Pilatus3 6M X: installation & commissioning week 47 & 48

MXCuBE development plans

no progress due to cyberattack backlog

- restart of MXCuBE (& ISPyB) activities after the meeting
  - update mxcubecore to latest revision on Github
- first milestone: migration of all hardware objects to abstract-class implementations of mxcubecore

BL14.1	BL14.2	BL14.3
Arinax MD2 Sample Video/Centring Pilatus3 6M Sample distance (Arinax) Irelec CATS SC Beamline control (Energy)	DESY Nanodiff Sample Video/Centring Pilatus3 2M Sample Distance (Aerotech) Irelec Isara2 SC Beamline Control (Energy)	Arinax MD2S Sample Video/Centring Pilatus2 6M Sample Distance (Aerotech) Beamline Control

Shutterless data collection, Characterization, Energy Scan, XRF energy-dispersive spectrum

- validation with Qt user interface, migration to MXCuBE-Web as new production version

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