



MXCuBE at MAXlab

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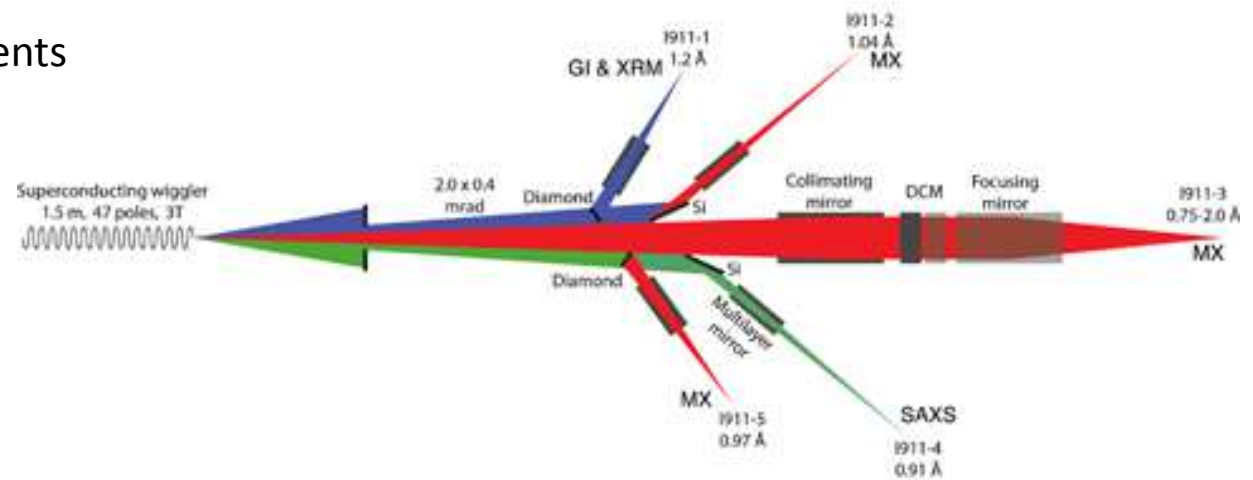
MX Beamlines at MAX-lab

i911-3

- MAD station
- Wavelength, 0.75-2.0 Å
- Beamsize, 30-150 μm
- Sample changer, CATS (3x10)
- Diffractometer, MD2
- Fluorescence detector, Amptek
- Detector, mar225
- HC1 Crystal Humidity Control
- Cryojet5, Oxford Instruments
- Cryo Shutter, in-house

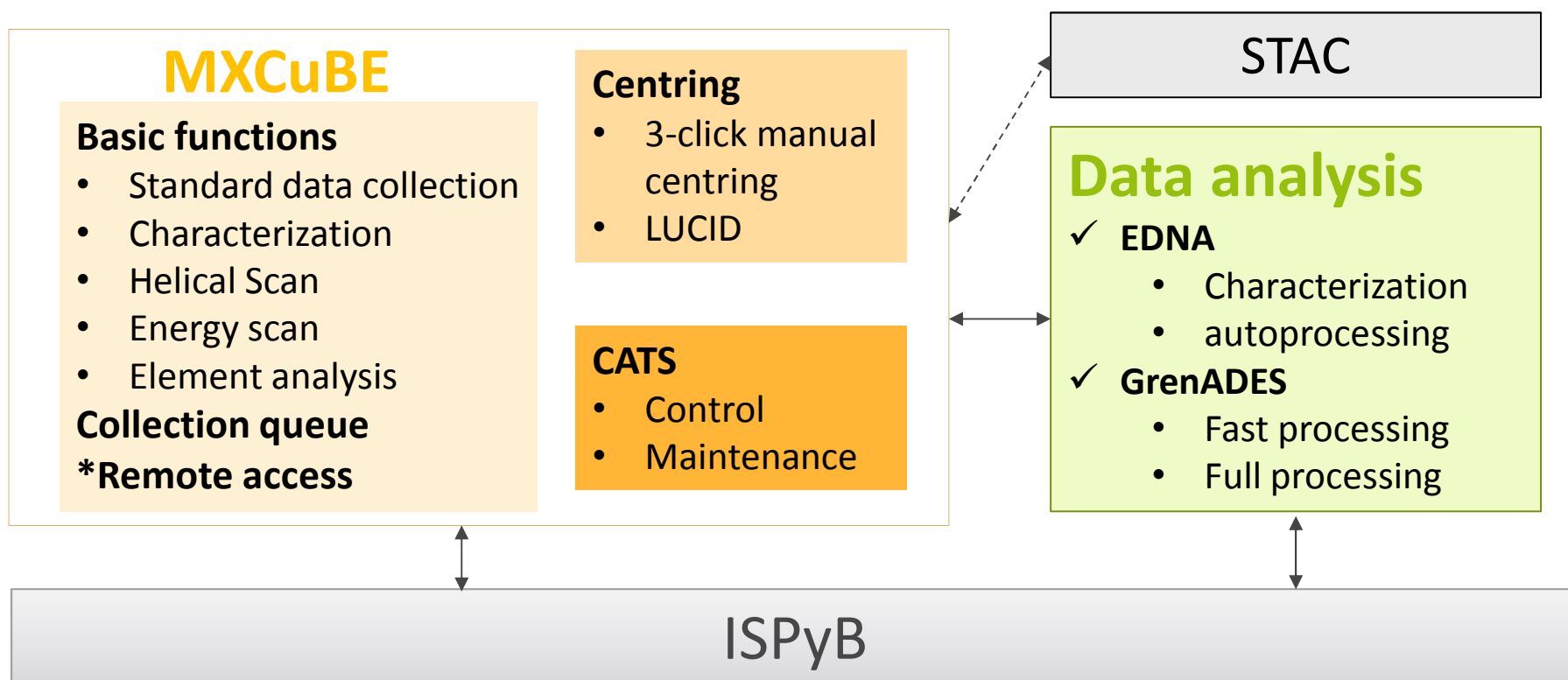
i911-2

- Single wavelength 1.04 Å
- Detector, mar165
- Goniostat
- Single axis (mardtb)
- Oxford Cryojet



Current Status

- Sep. 2014, MXCuBE 2.0 at 911-3
- Sep. 2014 – May. 2015, bug fixing/ adding new features



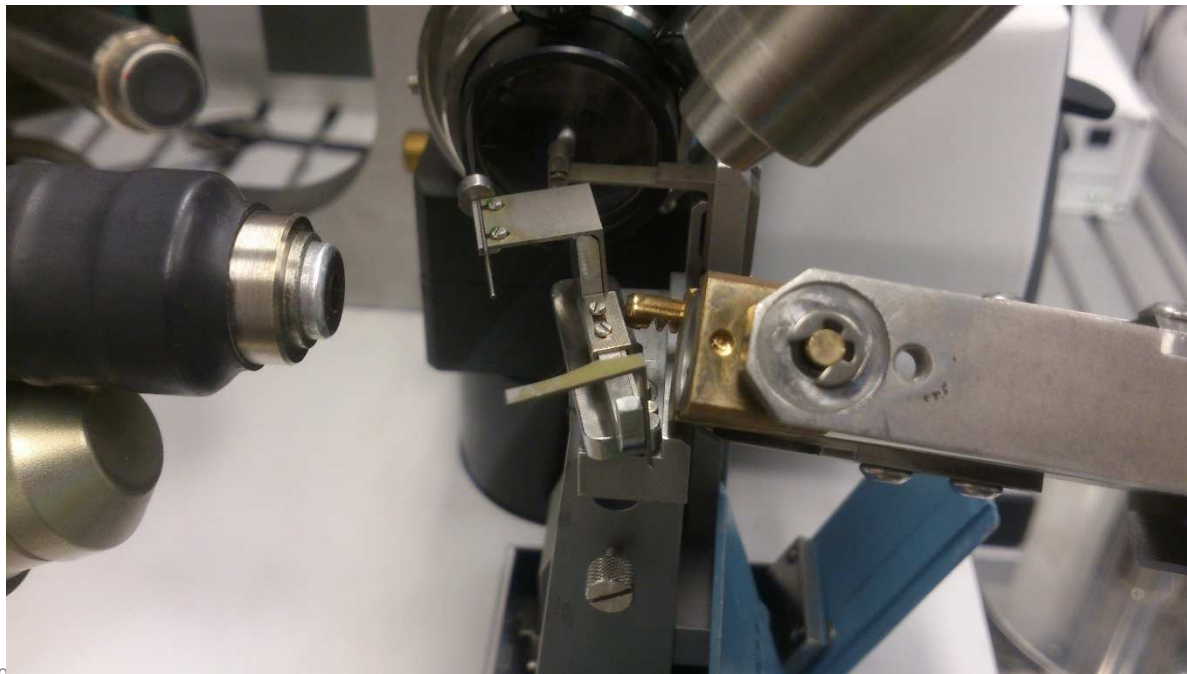
Current Status

- Sep. 2014, MXCuBE 2.0 at 911-3
- Sep. 2014 - May. 2015, bug fixing/ adding new features
- May. 2015 - now,
 - running our stable V2.0 at 911-3, with InstanceListBrick even for local data collection at the beamline

Serious collision during data collection!!

Collision of CATS with MD2

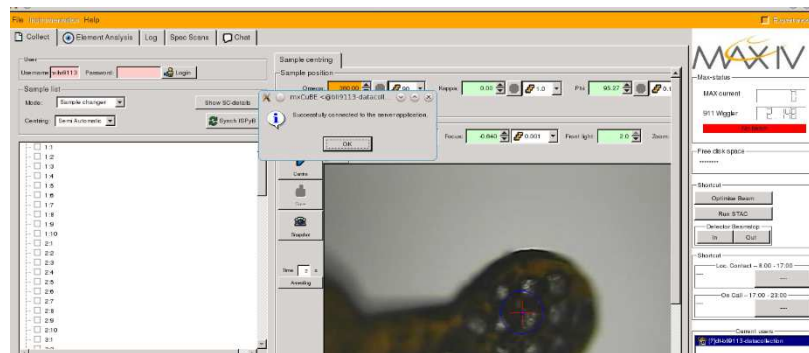
- Two MXCuBE instances running, both with motor controls
- Tired users launched sample exchange during data collection
 - Beamstop went down before unmount
 - MXCuBE started a new osc. , brought up the beamstop, set MD2 from *sample transfer* phase to *data collection* phase.
 - CATS came with a new sample without checking the MD2 phase
 - Collision of the CATS gripper with the beamstop arm



Current Status

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- May. 2015 - now,
 - running our stable V2.0 at 911-3, with InstanceListBrick even not for remote access

ONLY ONE instance to have BL control!!



2nd instance without BL control

Current Status

- Oct. – Nov. 2015, upgrade to MXCuBE 2.1 , in order to push our HardwareObjects to the main repository, not fully tested yet.

17 files in total
14 MAXLAB specific ones
3 core ones (bug fixing)

Big thanks to Matias!

Showing 17 changed files with 5,888 additions and 17 deletions.

	Unified	Split
+ MAXLAB/BL9113MultiCollect.py	+48 -0	■■■■■
+ MAXLAB/ElementAnalysis.py	+290 -0	■■■■■
+ MAXLAB/MAXLABBeamInfo.py	+44 -0	■■■■■
+ MAXLAB/MAXLABCats90.py	+621 -0	■■■■■
+ MAXLAB/MAXLABCatsMaint.py	+305 -0	■■■■■
+ MAXLAB/MAXLABEnergyScan.py	+651 -0	■■■■■
+ MAXLAB/MAXLABMarCCD.py	+82 -0	■■■■■
+ MAXLAB/MAXLABMultiCollect.py	+1,341 -0	■■■■■
+ MAXLAB/MAXLABResolution.py	+185 -0	■■■■■
+ MAXLAB/MaxLabISPybClient2.py	+1,745 -0	■■■■■
+ MAXLAB/MaxLabMDCamera.py	+178 -0	■■■■■
+ MAXLAB/MaxLabMicrodiff.py	+43 -0	■■■■■
+ MAXLAB/MaxLabSession.py	+237 -0	■■■■■
+ MAXLAB/MaxLdapLogin.py	+96 -0	■■■■■
• MicrodiffMotor.py	+2 -0	■■■■
• MiniDiff.py	+2 -2	■■■■
• queue_model_objects_v1.py	+18 -15	■■■■

Outlooks - BIOMAX

X-ray source	In-vacuum undulator, 18 mm period, 4.2 mm minimal gap
Monochromator	Horizontally deflecting, double crystal (Si 111)
Focusing optics	KB-mirror pair
Energy / Wavelength range	5 - 25 keV / 0.5 - 2.5 Å
Beam size at sample (focused)	20 x 5 μm^2 (hor x ver)
Flux at sample (focused, 1Å)	2×10^{13} ph/s
Diffractionmeter	MD3
Sample changer	ISARA
Detector	tbd

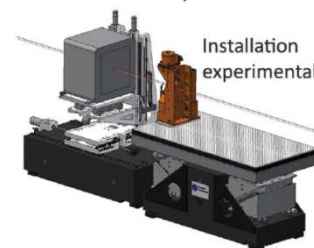
Main characteristics of the BioMAX



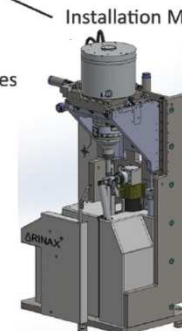
Installation undulator in 3 GeV ring



Installation sample changer



Installation experimental tables

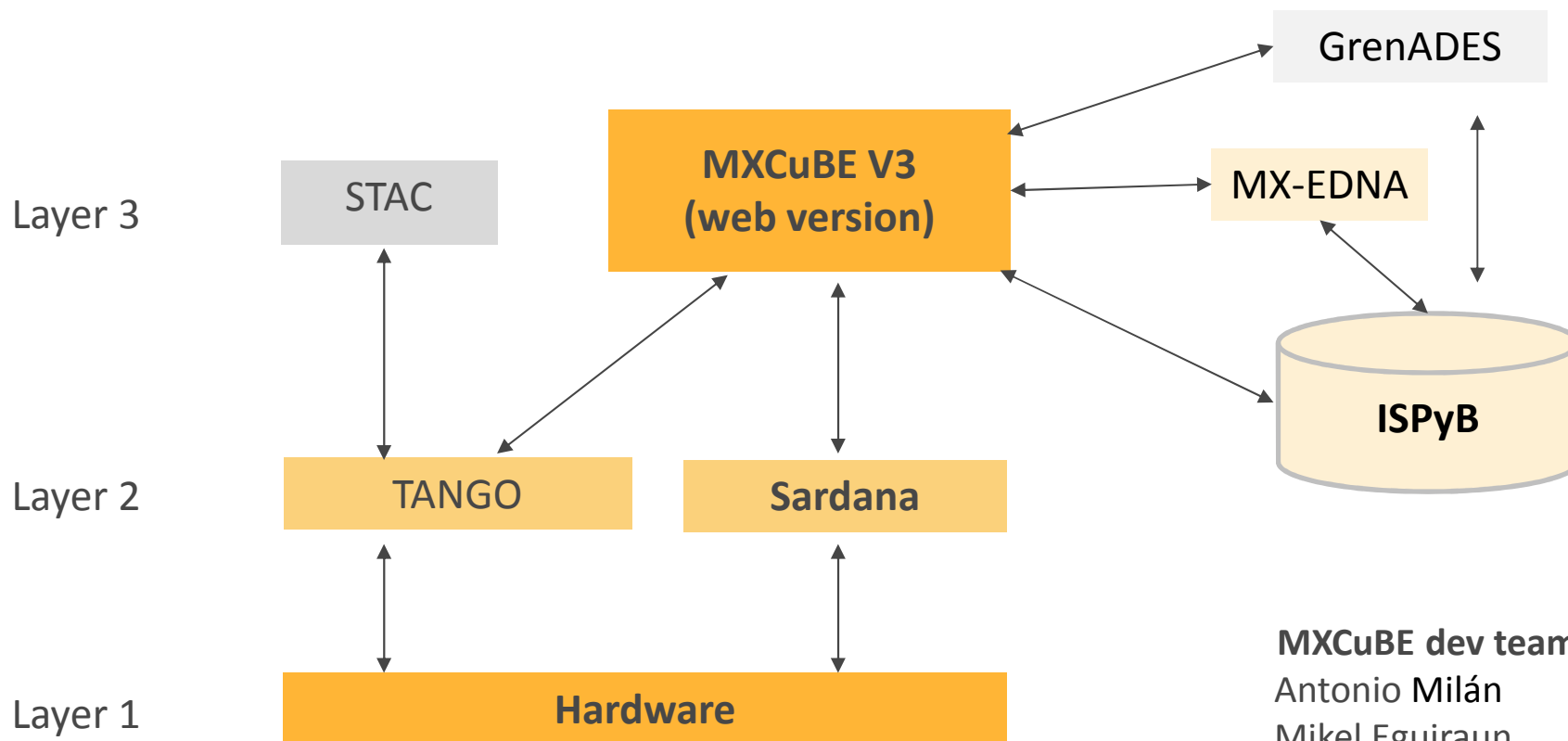


Installation MD3



Delivery Detector ?

Outlooks - BIOMAX



MXCuBE dev team
Antonio Milán
Mikel Eguiraun
Fredrik Bolmsten
Jie Nan

Estimated work

Thanks for your attention!