ALBA-mxCuBE status

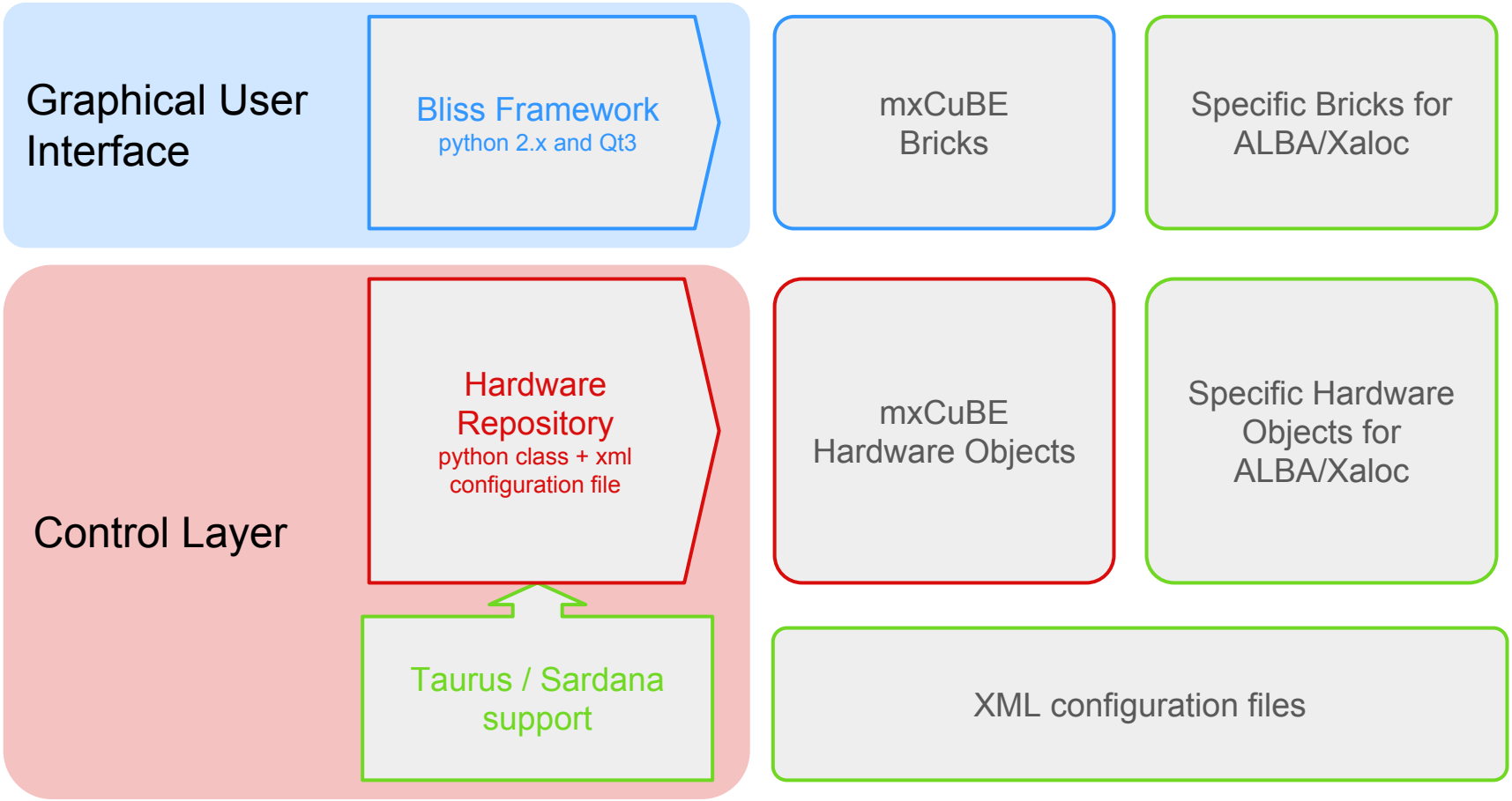
mxCuBE and EDNA integration @ XALOC

Jordi Andreu, Control Engineer @ ALBA

mxCuBE meeting from 30 November to 2nd December 2015

Integration of mxCuBE 2 @ ALBA

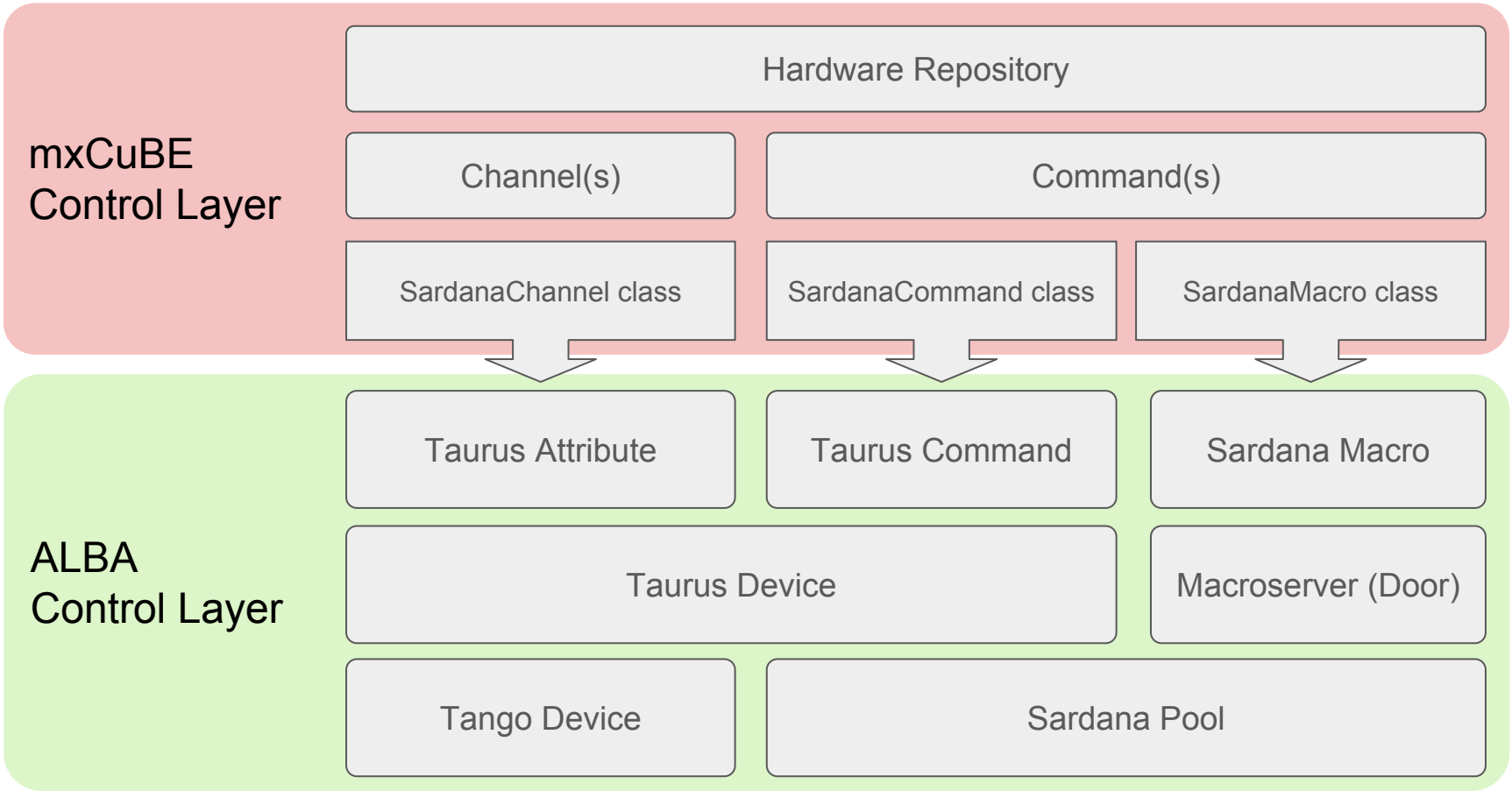
Over Sardana Control layer



Development over mxCuBE2 with Qt3 on virtual host *bl13mxcube*, ALBA branch.

Integration of mxCuBE 2 @ ALBA

Sardana Support for Hardware Repository (V. Rey)



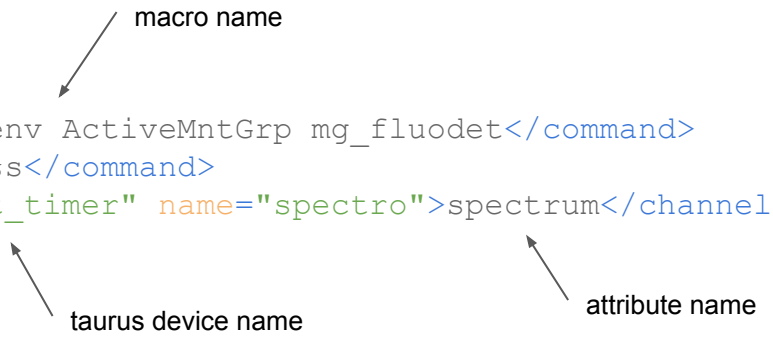
*Imlemented by V. Rey in *CommandContainer.py* and *Sardana.py* files from Hardware Repository (ALBA branch @ github)

Integration of mxCuBE 2 @ ALBA

Sardana Support for Hardware Repository

XML example

```
<object class="SardanaXfeSpectrum">
  <doorname>door/mxcube/1</doorname>
  <command type="sardana" name="configure">senv ActiveMntGrp mg_fluodet</command>
  <command type="sardana" name="acquire">ct %s</command>
  <channel type="sardana" taurusname="fluodet_timer" name="spectro">spectrum</channel>
</object>
```



SardanaMotor HwObj

Position, State and Stop are assumed by default::

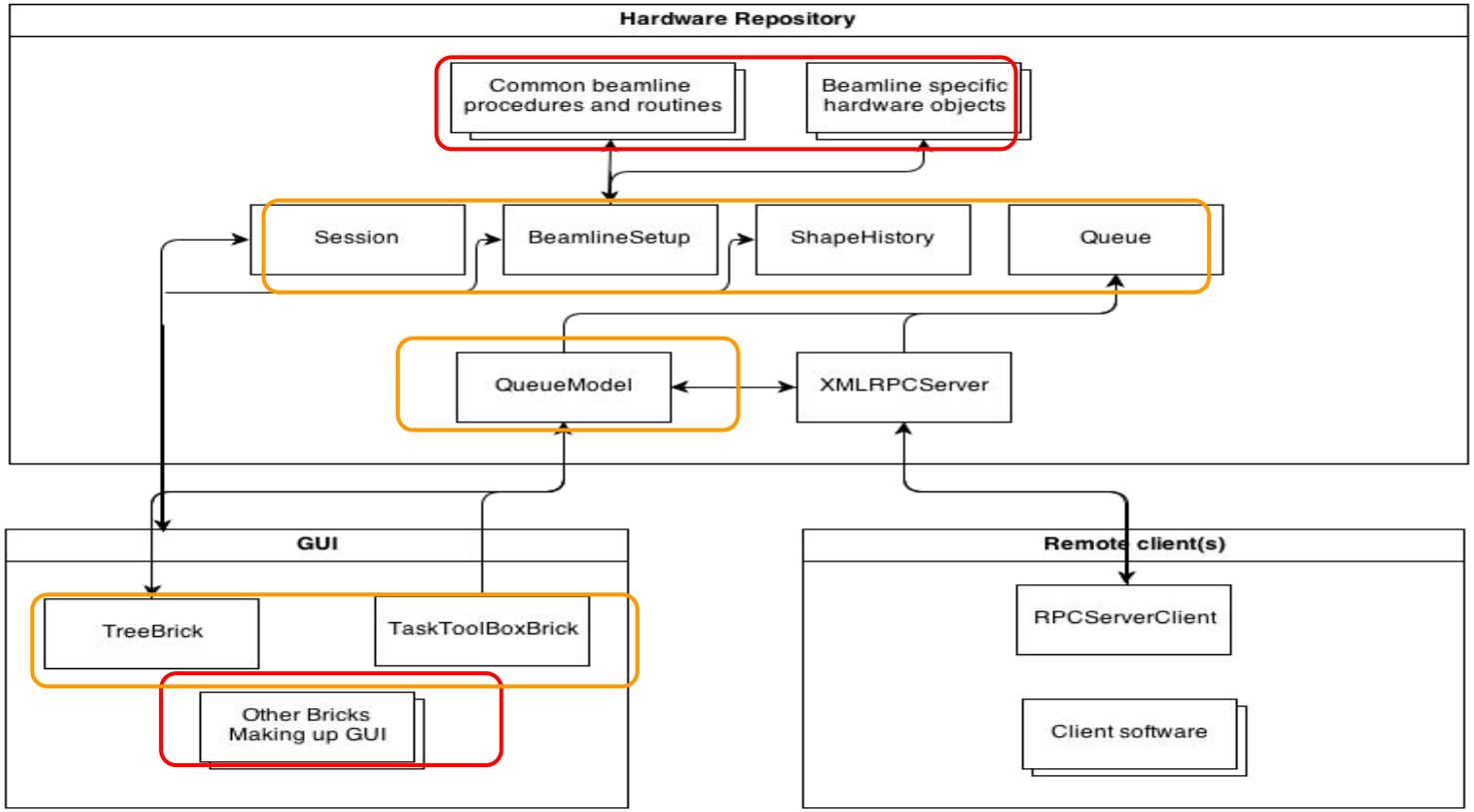
```
<device class="SardanaMotor">
  <username>Omega Z</username>
  <taurusname>omegaz</taurusname>
</device>
```

or they can specified in the configuration file:

```
<device class="SardanaMotor">
  <username>Omega Z</username>
  <taurusname>omegaz</taurusname>
  <channel type="sardana" polling="events" name="position">Position</channel>
  <channel type="sardana" polling="events" name="state">State</channel>
  <command type="sardana" name="stop">Stop</command>
</device>
```

Integration of mxCuBE 2 @ ALBA

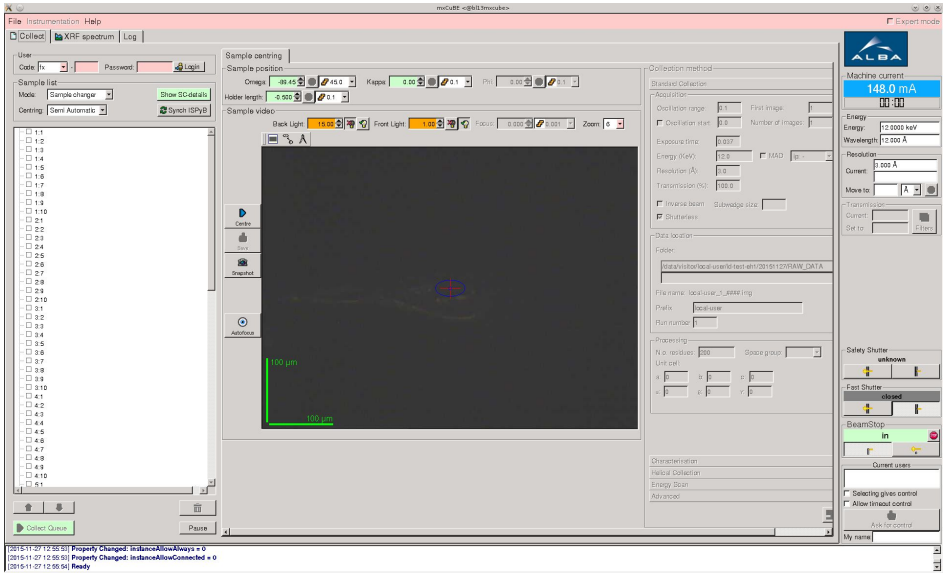
Integration approach: what is done and next steps



- Transmission and resolution.
- Energy HwObj (updates on abstract energyscan?)
- Sample changer (to be finished).
- XfeSpectrum (to be finished).
- Implement XalocMulticollect (from Abstract multicollect).

Integration of mxCuBE 2 @ ALBA

Bricks & Hardware objects implemented so far



- No *"Core"* Hardware Objects modified
- Update ALBA branch to 2.1 and add new specific ALBA HardwareObjects.
- LightControlBrick has to be pull requested (bug).

SardanaMotor
Device

AlbaMachCurrent
Device

XalocSafetyShutter
Device

XalocMiniDiff
Equipment

XalocLightMotor
Device

XalocZoomMotor
Device

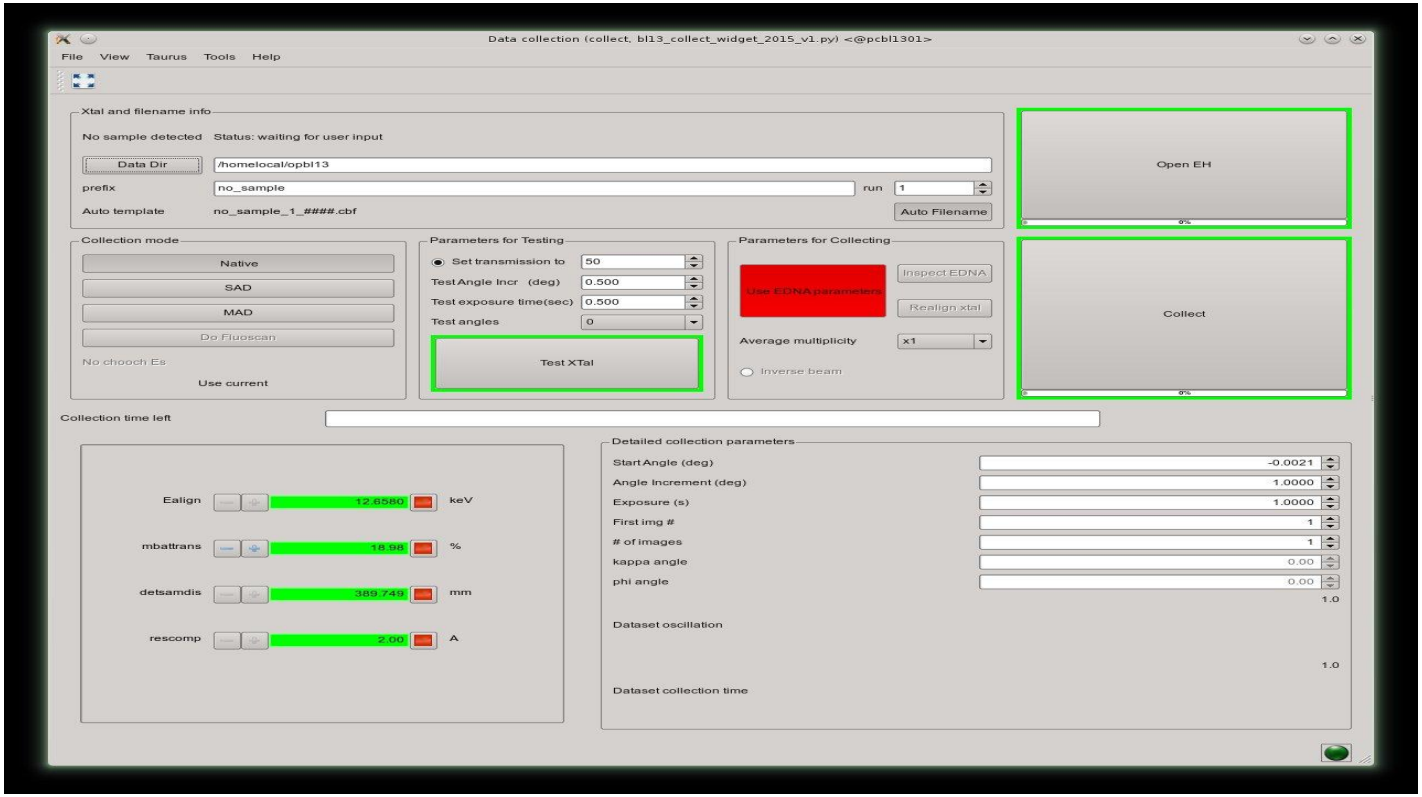
Beamcmds
Procedure

FalconCamera
Device

XalocBeamStop
Equipment

Integration of EDNA @ ALBA

Strategy and processing pipeline



- Sardana macro results used to populate the jobs submitted to Tango DS. Results managed by a specific taurus GUI, which re-launches a complete collect macro.

Integration of EDNA @ ALBA

Strategy and processing pipeline. Improve performance.

Currently in production:

- Using EDPluginControlInterfaceToMXCuBEv1_3 for **strategy calculation**.
- Now, running on workstation (8 cores) Intel(R) Xeon(R) CPU E31275 @ 3.40GHz.

Working on:

- EDPluginControlAutoprocv1_0 for data processing.
- Adapt the workflow to use an *in-house* cluster.

Thank you