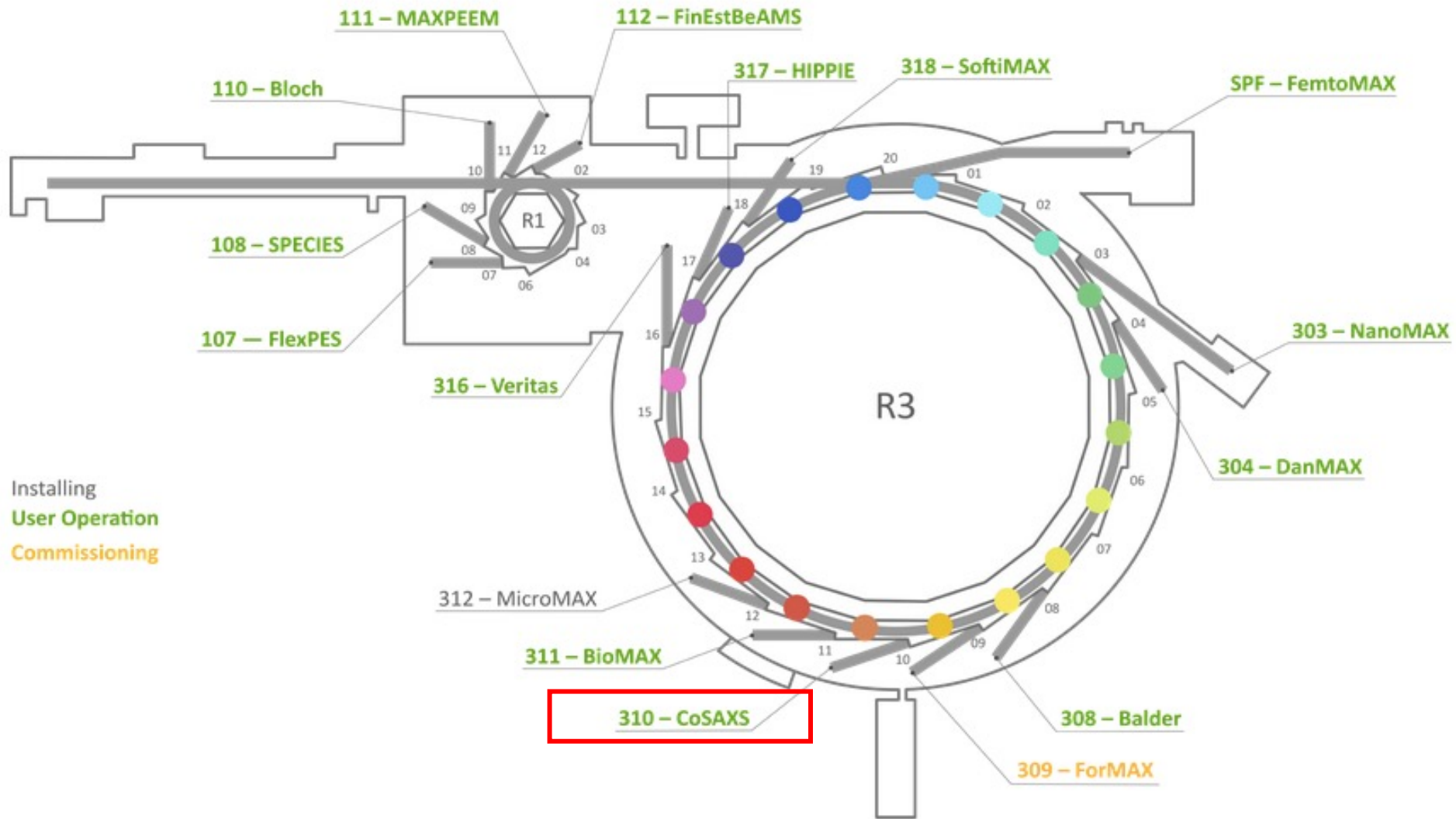


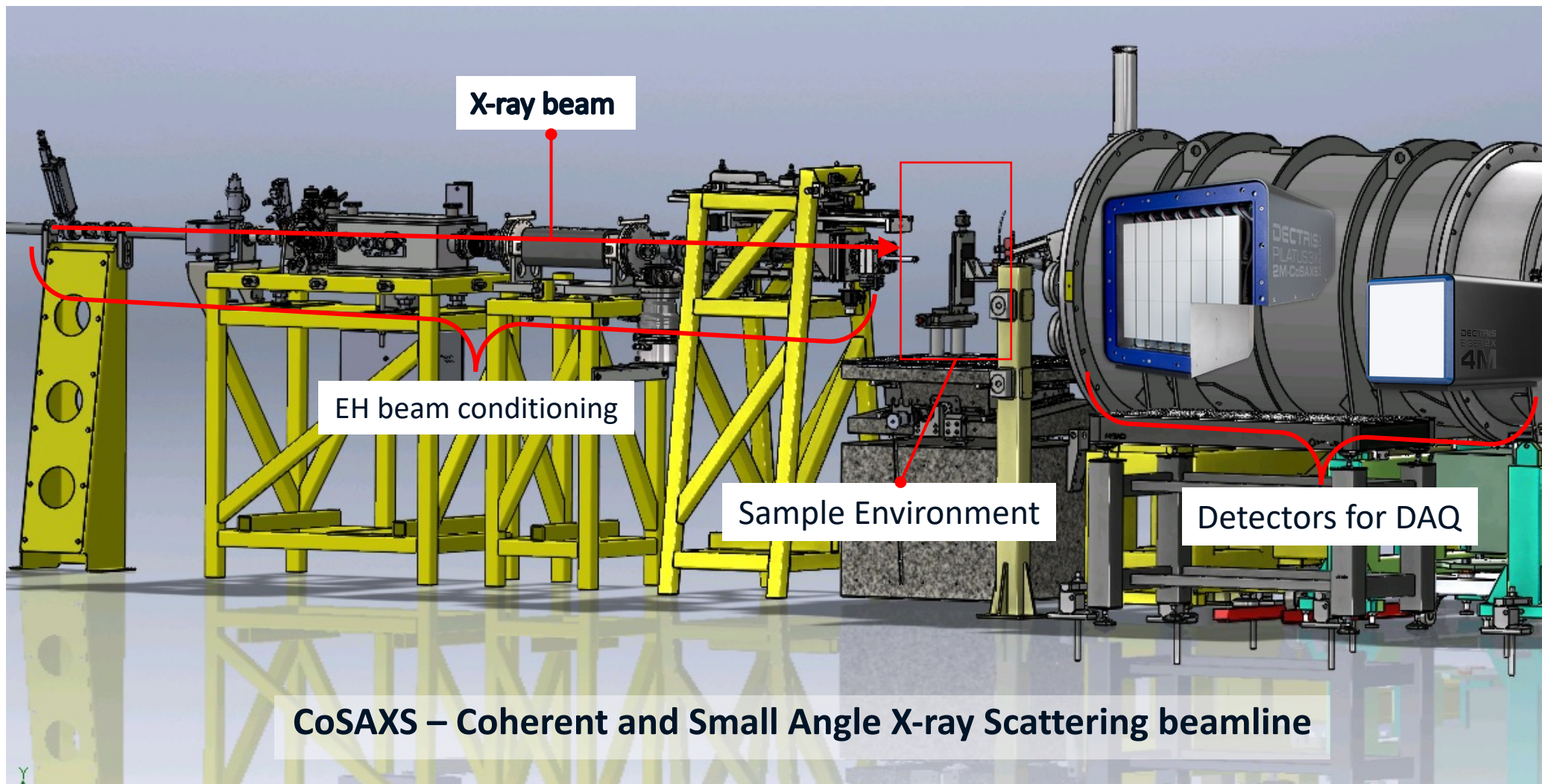
The logo for MAXIV, featuring the letters M, A, X, I, and V in a stylized, white, sans-serif font. The letters are interconnected, with the 'A' and 'X' sharing a common vertical stroke. A thin, white, curved line arches over the 'A' and 'X'.

Taranta @ CoSAXS beamline

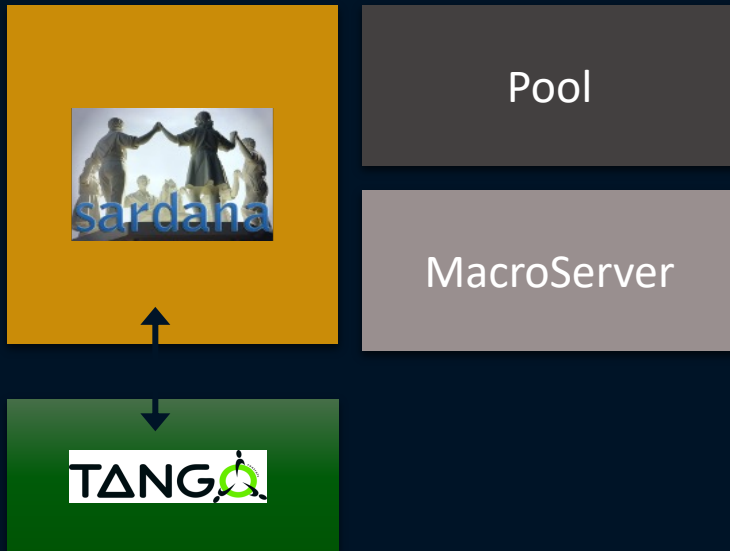
**Vanessa Da Silva
Roberto Appio**



Beamline Overview



CoSAXS Experiment Control and Orchestration

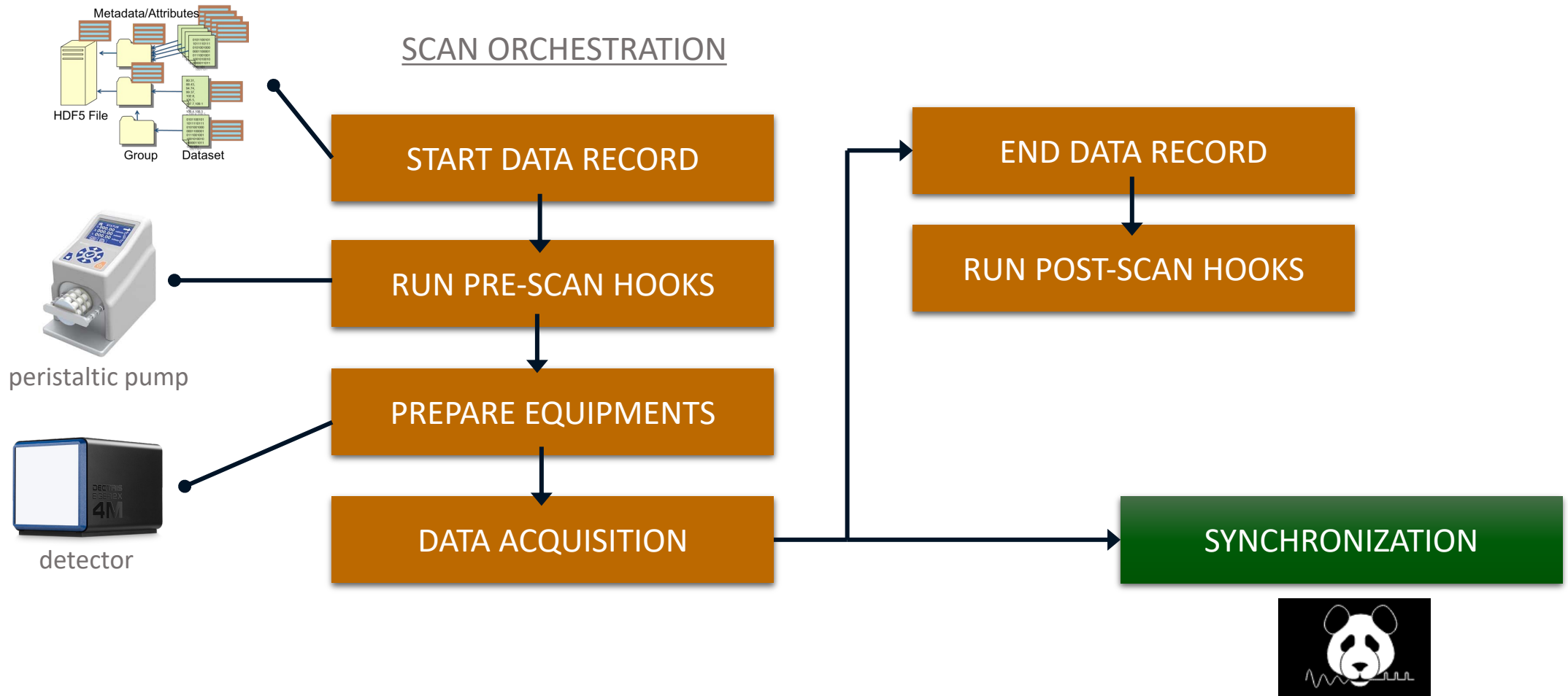


```
IPython: home/vansil  ㄿ#2
Door_Balder [1]:
```

SPOCK 🖐️



CoSAXS Experiment Orchestration



Challenges

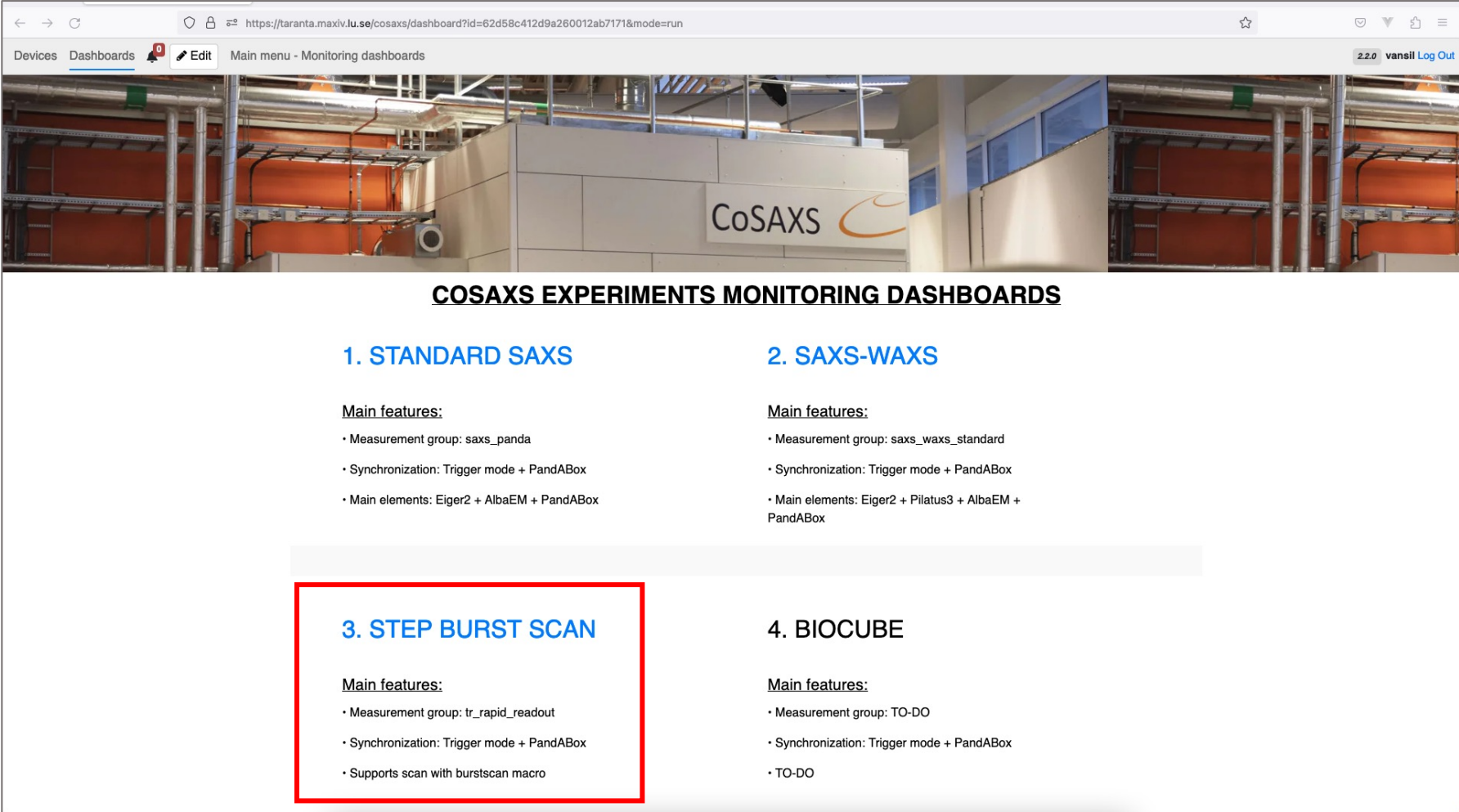
- Specifically about scans, experiment control and Sardana
- Beamline vacuum system

When experiment fails and goes wrong, current challenges:

- Quick diagnose
- Quick recovery
- Beamline staff autonomy
- Knowledge sharing with KITOS (operations support crew)
- Quick overview of beamline vacuum system state and control to main valves

Using TARANTA dashboards as an ally

- A Collection of CoSAXS main experiments
- Share of beamline specific knowledge
- KITOS crew can have a quicker response



Devices Dashboards Edit Main menu - Monitoring dashboards 2.2.0 vansil Log Out

COSAXS EXPERIMENTS MONITORING DASHBOARDS

1. STANDARD SAXS

Main features:

- Measurement group: saxs_panda
- Synchronization: Trigger mode + PandABox
- Main elements: Eiger2 + AlbaEM + PandABox

2. SAXS-WAXS

Main features:

- Measurement group: saxs_waxs_standard
- Synchronization: Trigger mode + PandABox
- Main elements: Eiger2 + Pilatus3 + AlbaEM + PandABox

3. STEP BURST SCAN

Main features:

- Measurement group: tr_rapid_readout
- Synchronization: Trigger mode + PandABox
- Supports scan with burstscan macro

4. BIOCUBE

Main features:

- Measurement group: TO-DO
- Synchronization: Trigger mode + PandABox
- TO-DO

HOME ↩

BURST STEP SCAN MODE - MONITORING DASHBOARD



EIGER DETECTOR



Eiger Tango Device STANDBY ●

Status: Idle



Eiger Sardana Controller ON ●

Status: eiger_2d_ctrl is On

nTriggers: 11 Number of frames to be acquired

nFramesReceived: 0 Number of frames acquired. It must be == NbTriggers

ISSUES TO START A NEW SCAN

If Eiger is RUNNING or EXTRACT state, use the DISARM button

Stop

PILATUS DETECTOR



Pilatus Tango Device FAULT ●

streamer failed: [Errno 110] Connection timed out. Make sure pilatus-streamer and



Pilatus Sardana Controller ON ●

Status: pilatus_ctrl is On

nTriggers: Number of frames to be acquired

nFramesAcquired: Number of frames acquired. It must be == NbTriggers

ISSUES TO START A NEW SCAN

If Pilatus is RUNNING state: use the STOP button

Stop

ACTIVE MEASUREMENT GROUP

tr_rapid_readout FAULT ●

ELEMENTS STATE

Status: pandapcapfmc_1D_avg is Standby
pandapcapfmc_i0_avg is Standby
eiger_tr is Fault

if in the end of the scan at least one element of the measurement group is still running, use the STOP button below

STOP tr_rapid_readout

MS - DOOR STATE

MacroServer - Door State ON ●

Status: The device is in ON state.
Macro stack ([state] macro):

ISSUES TO LAUNCH OR A HANG MACRO

If the Door is in RUNNING state, use the ABORT

Abort

If the macro is running but got stuck in the middle, use the RELEASE button

Release

PANDABOX CONFIGURATION

PandABox Sardana Ctrl ON ● PandABox Tango DS ON ●
Status: PandABox #01 and PandABox #02 waiting for Trigger command.
AutoShutter enabled.

ATTRIBUTES CONFIGURATION

Bursts Per Interval 20 it must be equal = nb_steps*points_per_step
Interval Wait Time 0 it must be always 0 (ZERO). Only used for burst scans
Number of Intervals 1 it must be always 1 (ONE). Only used for burst scans
Points Per Step 1 It must be equal the number of bursts which be sent per motor step

BEAM PARAMETERS

IO null
IT null
RING CURRENT 0.01 mA

SAMPLE ENVIRONMENT

LaudaLoop FAULT ● RESET





COSAXS EXPERIMENTS MONITORING DASHBOARDS

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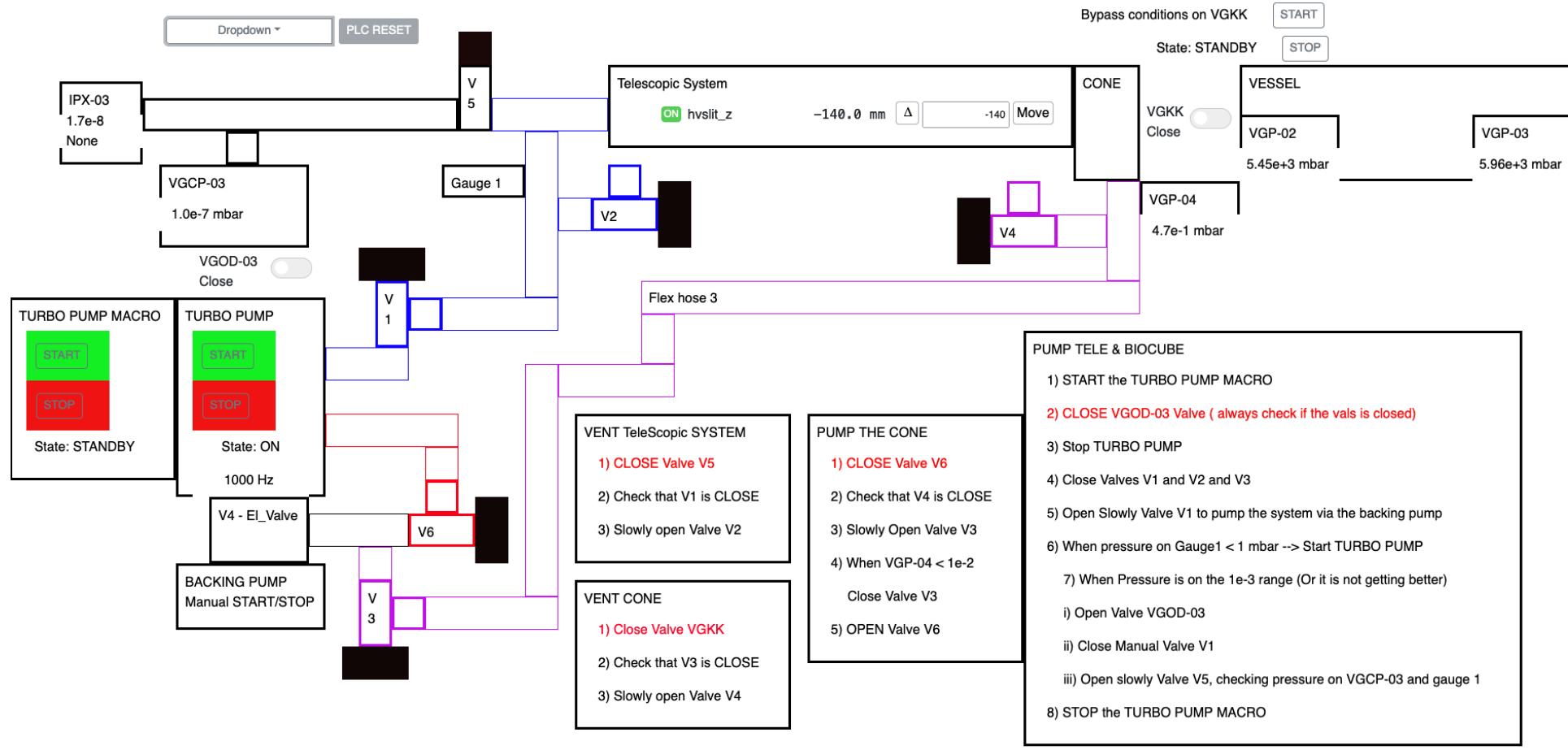
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Main features:

- Measurement group: TO-DO
- Synchronization: Trigger mode + PandABox
- TO-DO



Thank you!

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