

Short manual user guide to PROXIMA-1 beamline

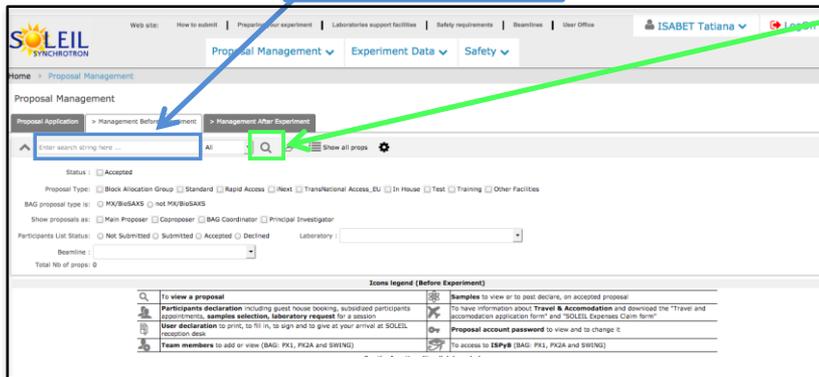
Connection to MXCuBE

How to find LOGIN/ PASSWORD to connect to MXCuBE and NoMachine

- 1- Log-in the SunSET : <http://sunset.synchrotron-soleil.fr/sun/>
- 2- Click on « Proposal Management », then on « Before experiment »



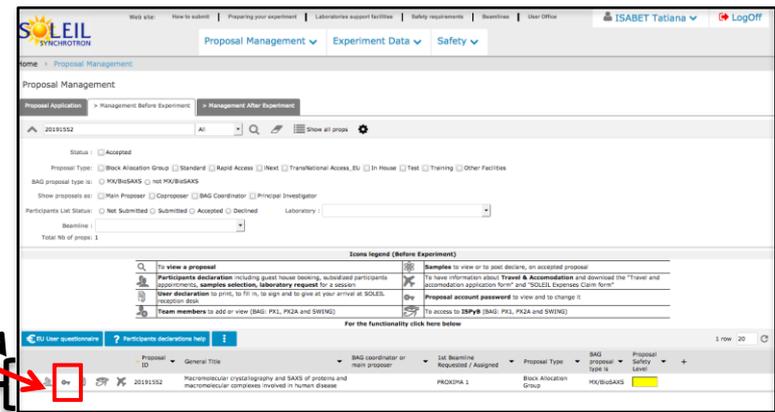
- 3- Search for your project : Write your **project number** and then click on the **magnifying glass**



NB : You will find your project number in the mail sent by the User Office confirming your beamtime.

- 4- Your project appears in the bottom of the page, click on the **key icon** to see your password :

Hint : the assigned password can be changed, for convenience purposes, by the PI of the project.



Introduction to PROXIMA-1

Data collection

Recommendations / parameters for data collection optimization

Typical transmission settings

- Data characterization : 10-20 % transmission
- Data collection : 50% transmission @ 450mA
40% transmission @ 500mA
- Helical scan : up to 100% transmission

Visualization interfaces

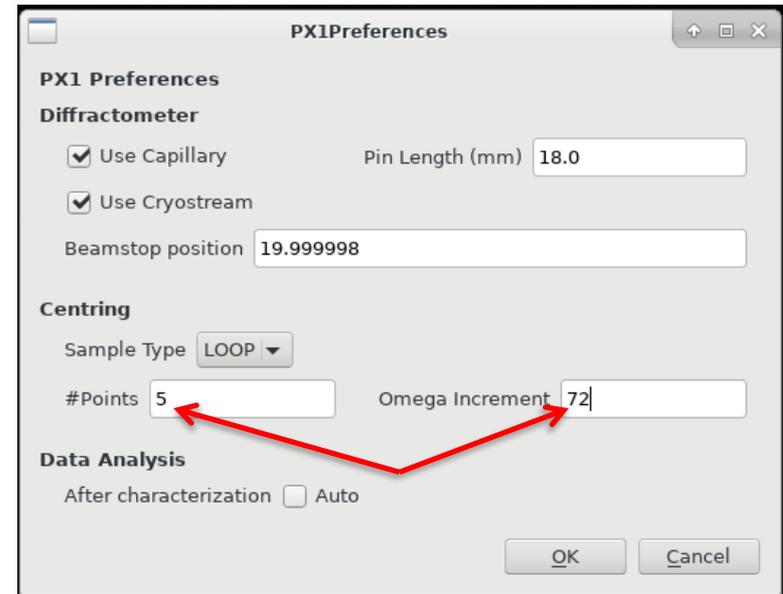
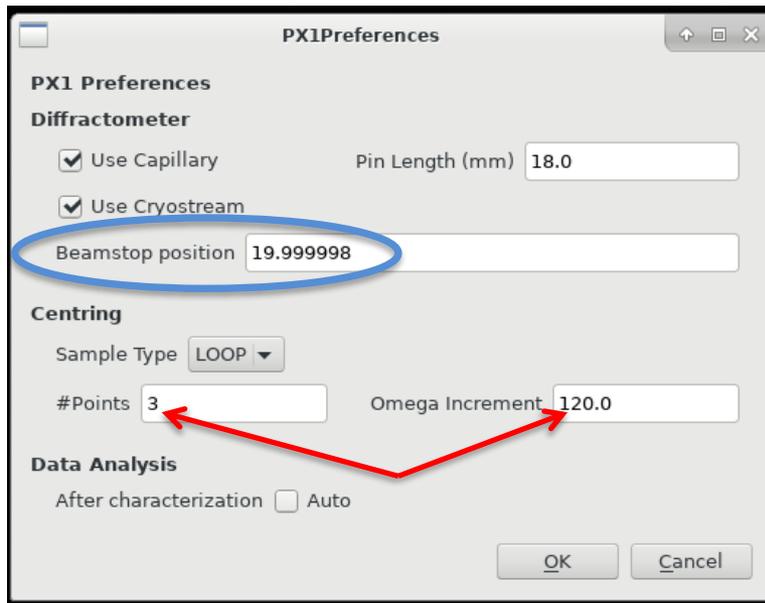
Important :

- ADXV is in the « follow » mode (*adxv_follow*) only for characterization visualization (not for standard collection) when *.h5 is replaced by *.cbf in the pattern field of the ADXV Load window.
- ALBULA can be used for live data collection visualization (*in Auto LOAD, EIGER monitor, check if IP address is 195.221.8.71 port 80 Pause 2*)

Centring parameters

Define the number of clicks for centring in the Proxima 1 -> Edit Preferences tab.

Default setting : 3 clicks and 180° Often used alternate setting : 5 clicks and 72°



Beamstop position

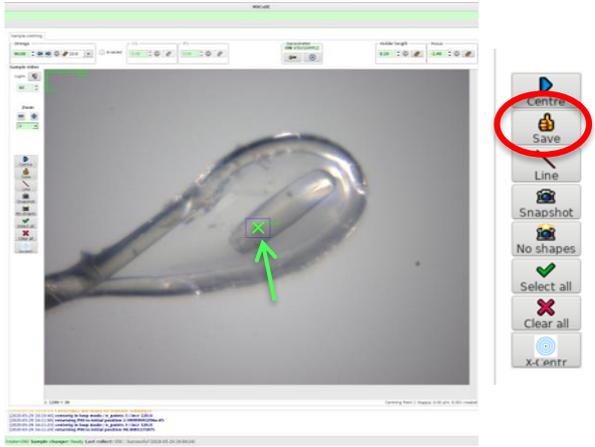
You can change the beamstop position in the Proxima 1 -> Edit Preferences tab

The Beamstop default position is 20 mm

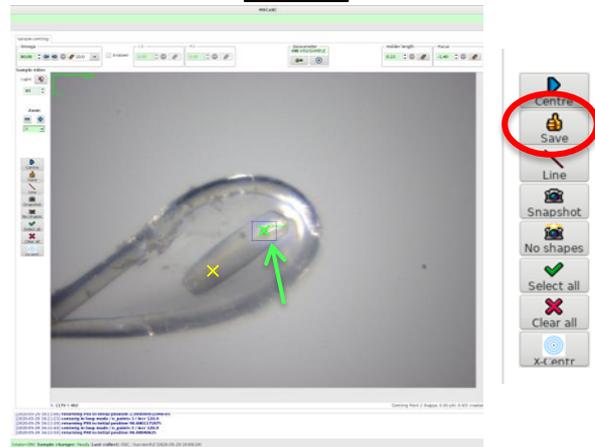
The beamstop may be moved from 10 to 40 mm from the sample.

Helical scan

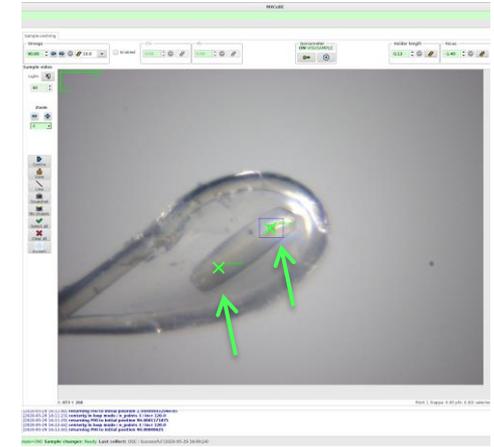
1- **center** on the first point then **save**



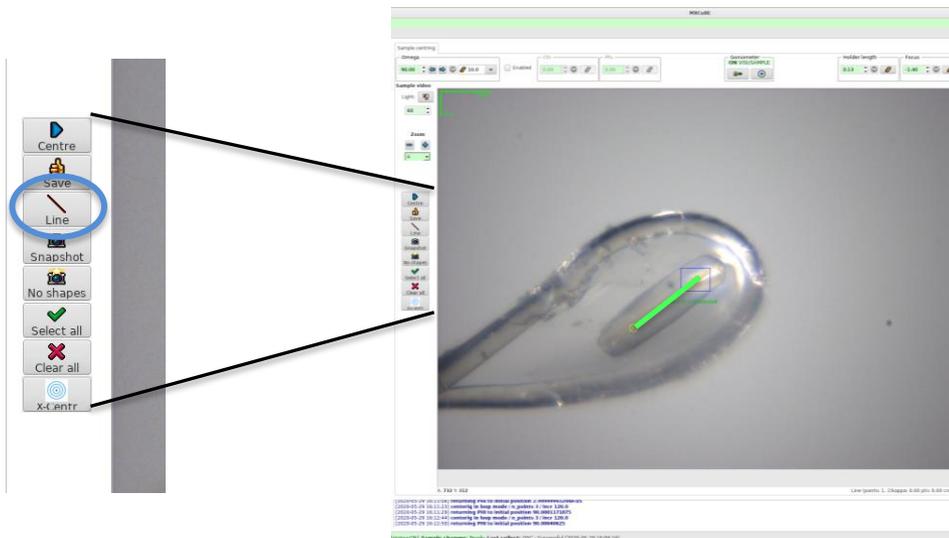
2- **center** on the second point then **save**



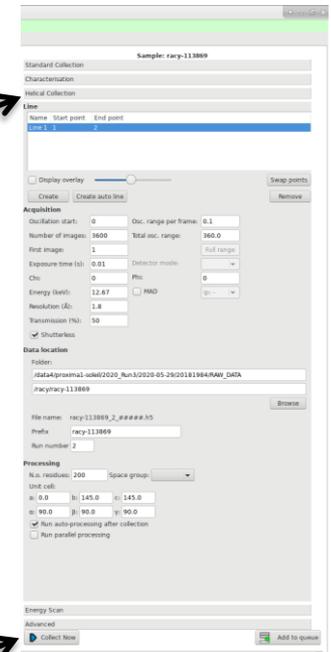
3- select the two defined centers (Click 1st - **Ctrl** Click 2nd)



4- Click on the **line** icon to draw the line between the two points



5- Fill acquisition parameters in the helical collection tab

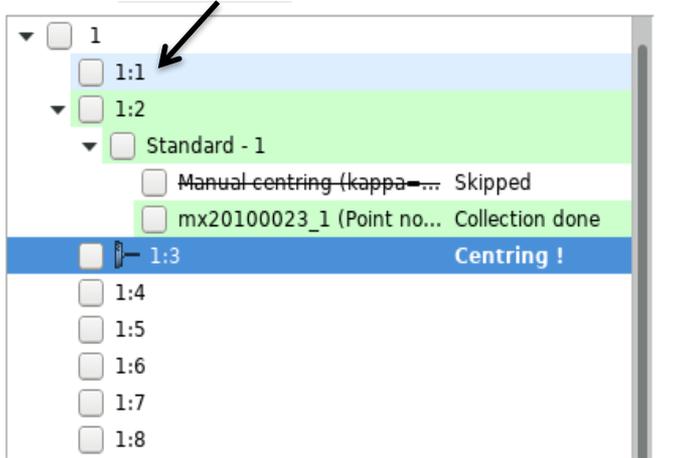


6- Start data collection



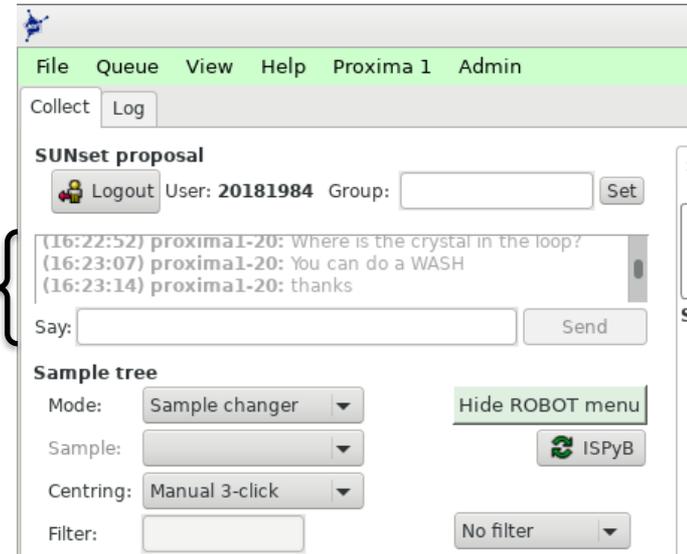
Misc. Features

- a light blue color will highlight every mounted samples on the tree view that have been unmounted without being exposed to X-rays.



- Above the Tree view a chat window will allow you to interact with the local contact

Chat windows

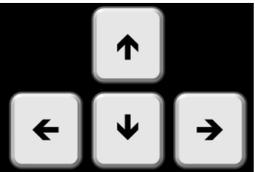


Shortcuts during centering



- Centering by Double clicking : double clicking on the loop will bring it on the beam.

- Keyboard arrows : using keyboard arrows will slide the loop/crystal position within the camera window plane.



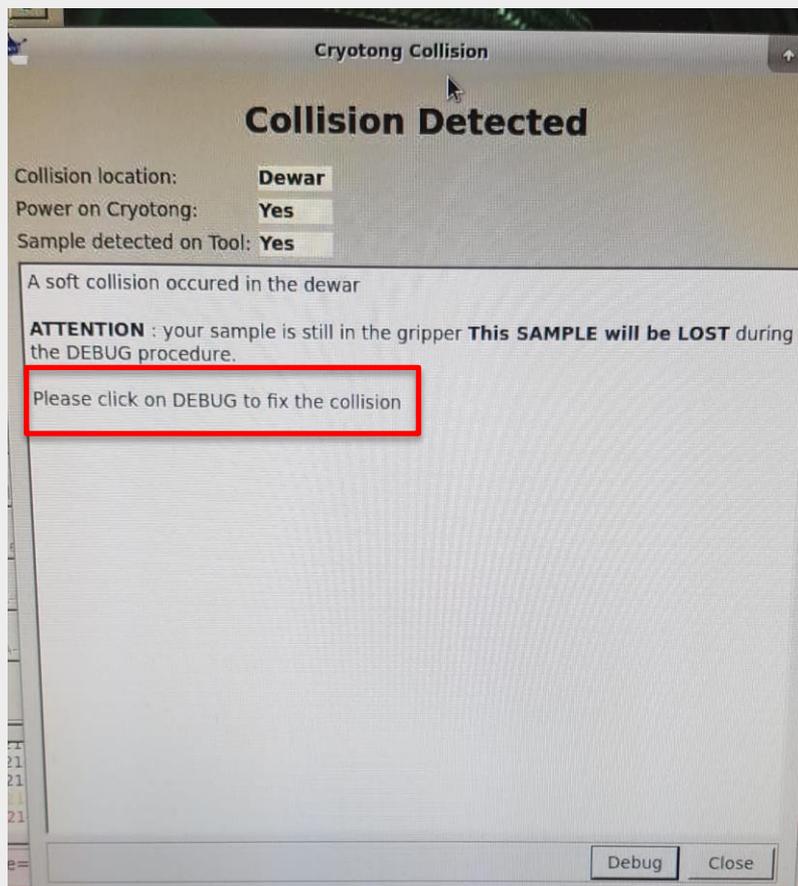
Fixes on issues that might happen on
PROXIMA1

Issue : Robot stay stuck (at the goniometer or in the dewar).

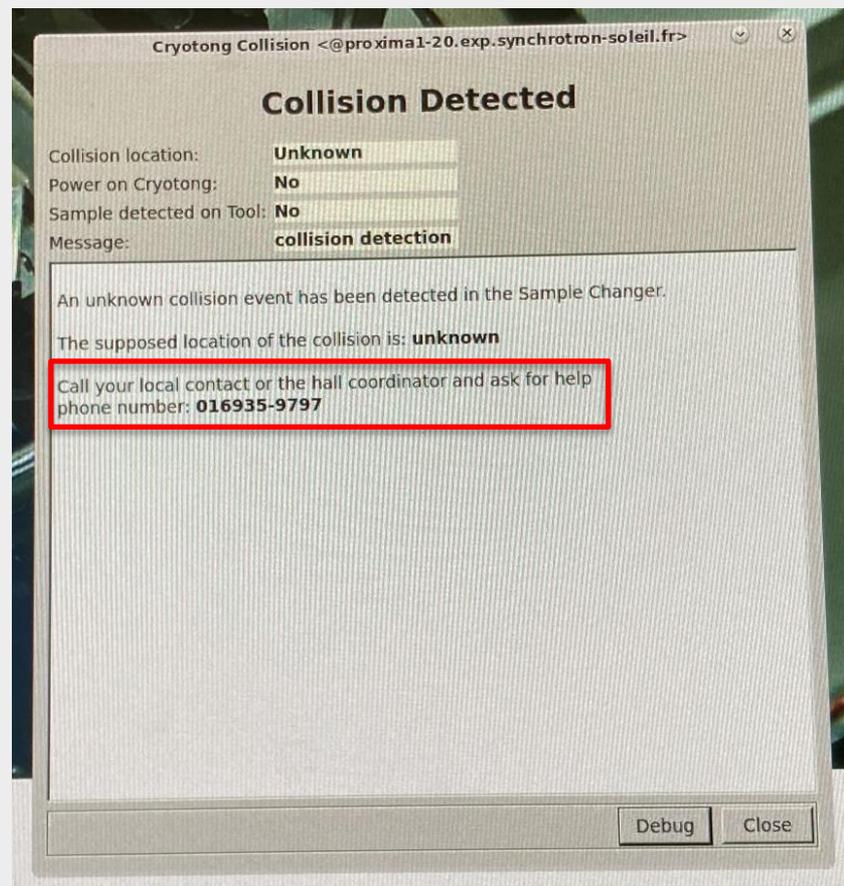
A collision (soft or hard) occurred :

A pop up window will show up accordingly a will tell you the procedure to follow.

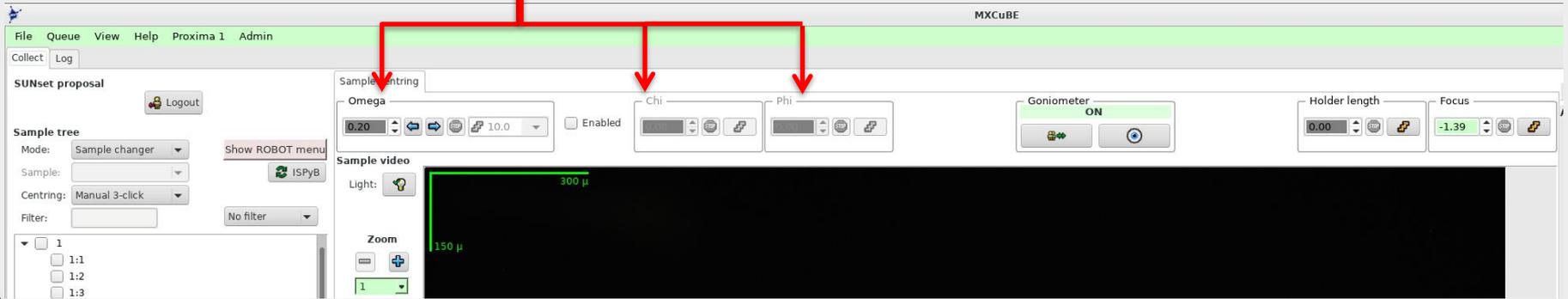
Pop up for soft collision



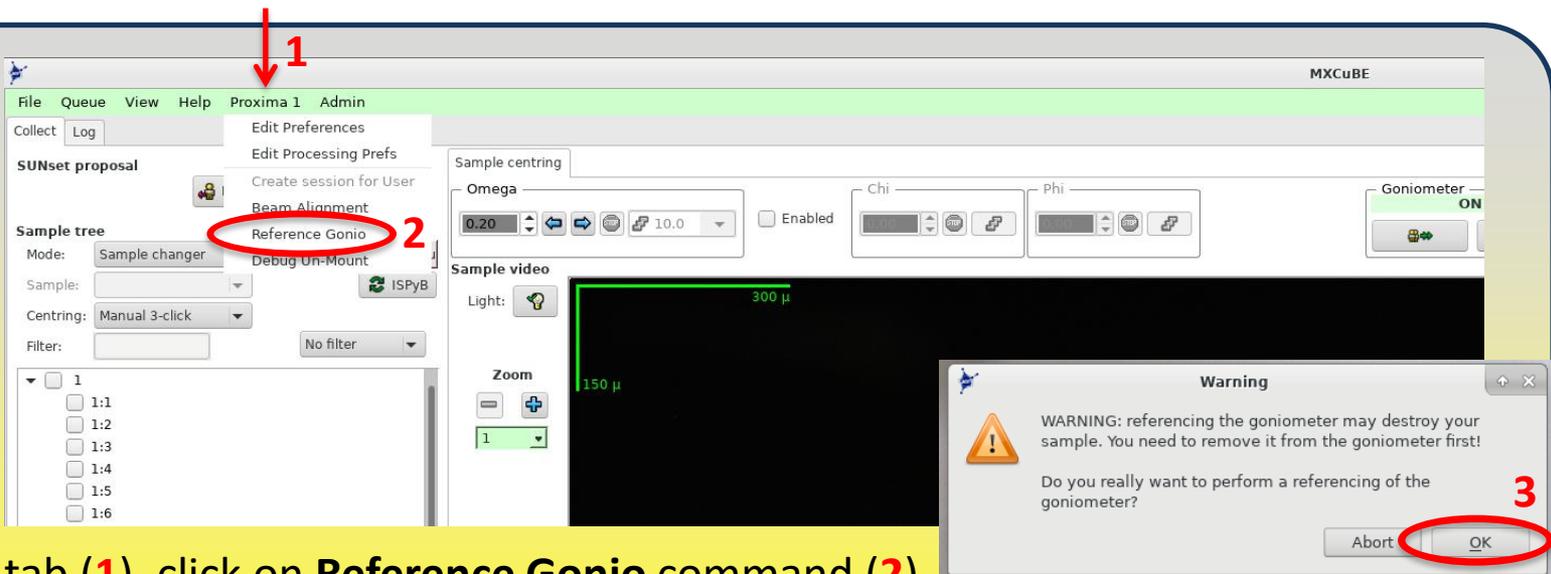
Pop up for hard collision



Issue : Grayed out angle fields preventing the goniometer action



Fix :



- In Proxima1 tab (1), click on **Reference Gonio** command (2).
- Then Confirm **ok** (3) in the pop up window to launch the referencing procedure
- At the end of the procedure you can go on mounting the next sample (the one on the gonio during the procedure is lost)

Issue : Robot won't execute a mount or unmount command (frozen).

In the Robot tab (1 - after clicking on « Show Robot menu » on the main window-)

- The Robot is in moving state (2)
- In the robot message field there is the following error message : « WAIT for SplOn condition / not TRUE / 53 not FALSE » (3)

1 - Robot tab

2 - Robot State: Moving

3 - Robot message: WAIT for SplOn condition / not TRUE / 53 not FALSE

4 - Admin menu

5 - Debug Un-Mount command

6 - OK button in the dialog box

Fix :

- In Proxima1 tab (4), click on **Debug Un-Mount** command (5).
- Then Confirm **ok** (6) in the pop up window informing that the procedure is finished.
- You can mount the next sample

Bugs : ADXV frozen or visualization screen whited/blacked out

Fix :

- In Proxima1 tab (1), click on **Restart Camera** or **Restart ADXV** command (2) accordingly.

The screenshot displays the MXCuBE software interface. The 'Proxima 1' menu is open, and the 'Restart Camera' and 'Restart ADXV' options are circled in red. A red arrow labeled '1' points to the 'Proxima 1' menu, and a red '2' is placed next to the circled options. The interface includes a menu bar (File, Queue, View, Help, Proxima 1, Admin), a 'SUNset proposal' section with a 'Log' button, a 'Sample tree' section with 'Mode', 'Sample', 'Centring', and 'Filter' controls, and a 'Sample video' section with 'Light', 'Zoom', and 'Centre/Save' buttons. The 'Sample video' section shows a black video frame with green scale markers (300 μ and 150 μ) and a 'Light' icon.

Bug : for stopping a started data collection/characterization

Fix :

Uncheck all the currently checked sample boxes (1-2) before clicking on STOP (3)

The image illustrates a two-step process to stop a data collection. In the first step, the user identifies the currently checked sample boxes in the tree view, indicated by red arrows labeled '1'. In the second step, the user unchecks these boxes, indicated by red arrows labeled '2'. Finally, the user clicks the 'Stop' button, which is circled in red and labeled '3'.

1

2

3