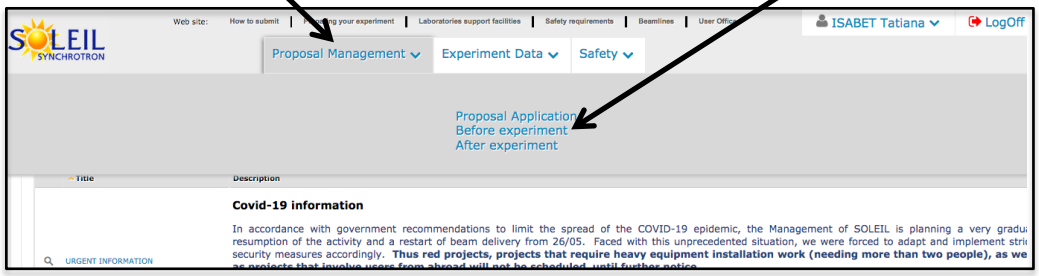
Short manual user guide to PROXIMA-1 beamline

Connection to MXCuBE

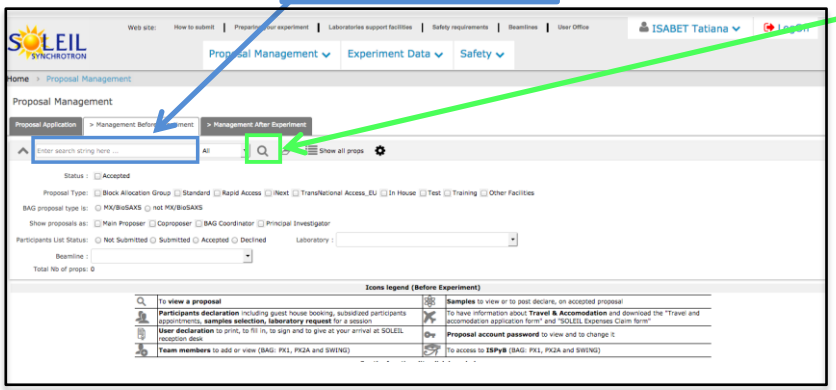
How to find LOGIN/ PASSWORD to connect to MXCuBE and NoMachine

1- Log-in the SunSET : http://sunset.synchrotron-soleil.fr/sun/

2- Click on « Proposal Management », then on « Before experiment »

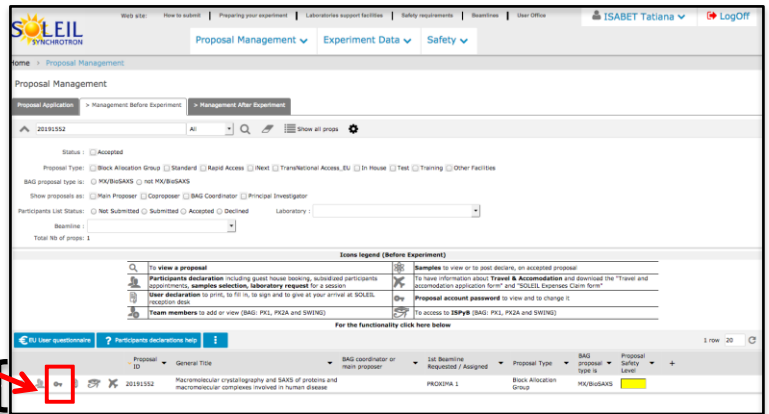


3- Search for your project : Write your project number and then click on the magnifying glass



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 : 20-30 % transmission

- Data collection : 50% transmission @ 450mA
  40% transmission @ 500mA

- Helical scan : up to 100% transmission

Visualization interfaces

Important :

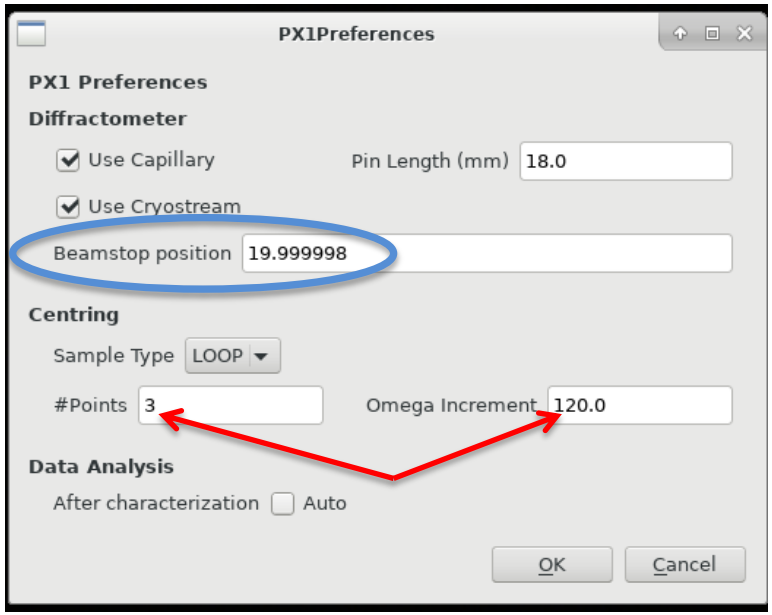
ADXV : to avoid ADXV crash during characterization (frozen ADXV window), do not change any ADXV settings until the end of the characterization.

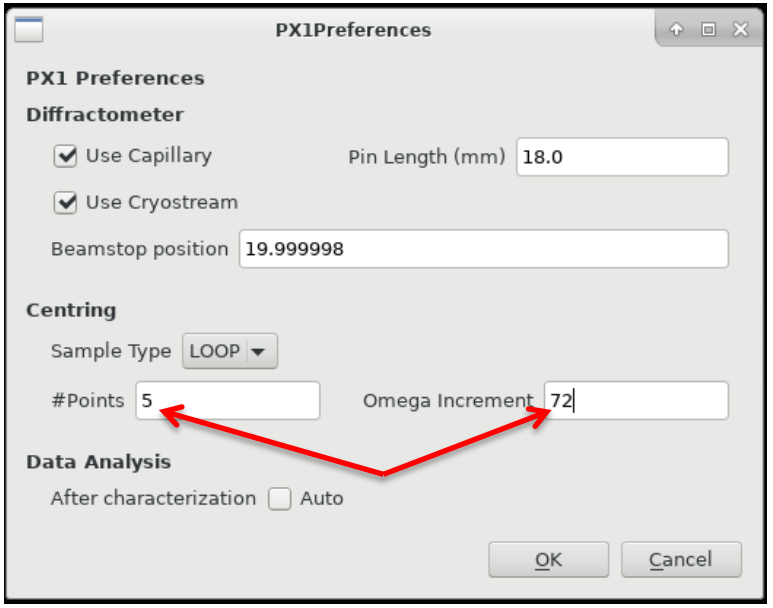
- ADXV is in the « follow » mode only for characterization visualization (not for standard collection) when *.h5 is replaced by *.cbf in the pattern field of the ADXV Load window.
- ALBULA can be used for live data collection visualization *(in Auto LOAD, EIGER monitor, check if IP address is* 195.221.8.71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

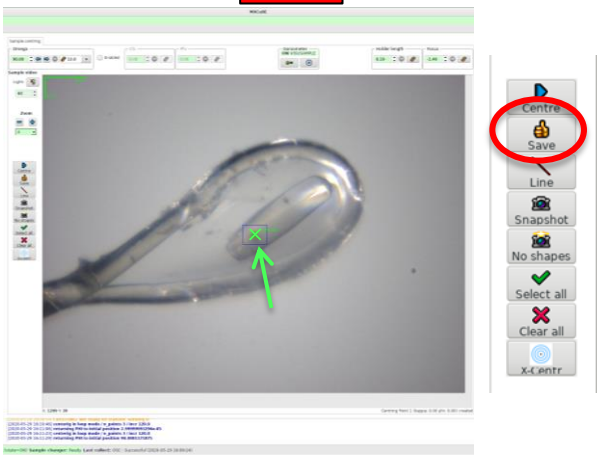
You can change the beamstop position in the Proxima 1 -> Edit Preferences tab

The Beamstop default position is 20 mm

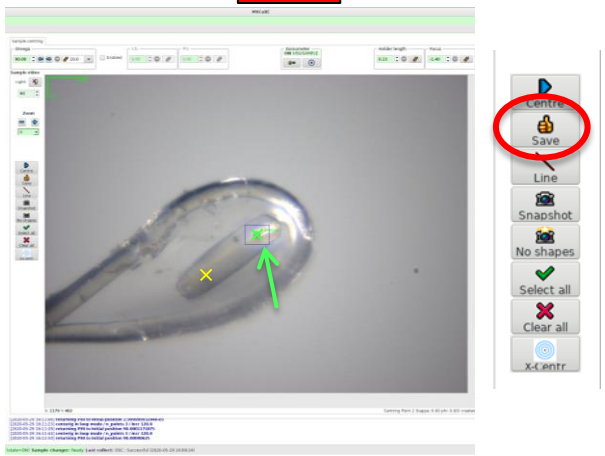
The beamstop may be moved from 10 to 40 mm from the sample.

Helical scan

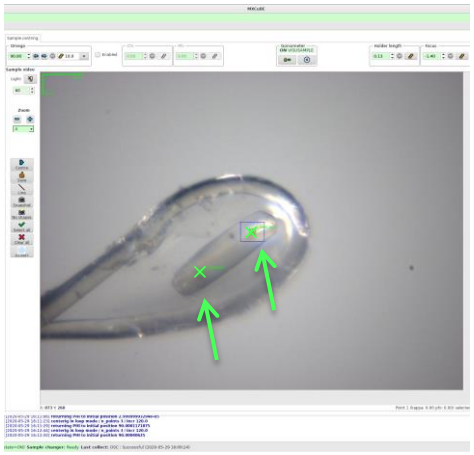
1- center on the first point then save



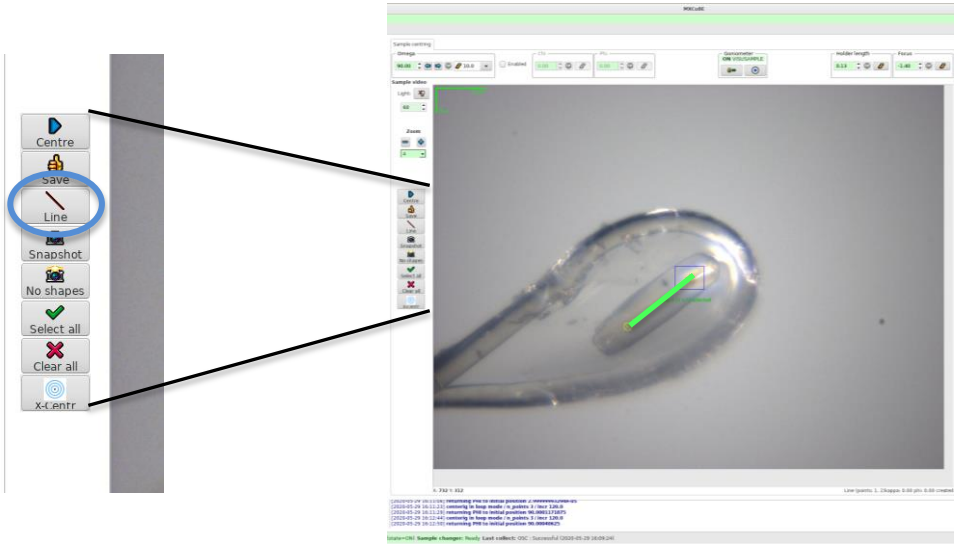
2- center on the second point then save



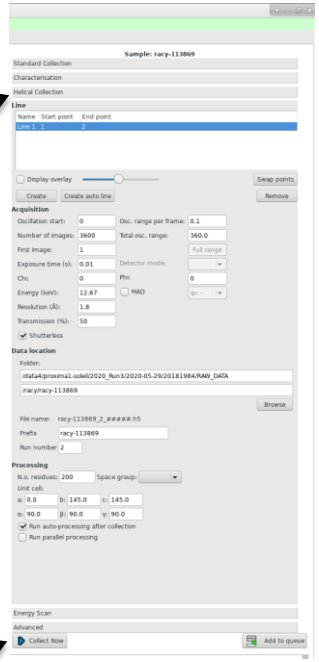
3- select the two defined centers (Click 1st - **Ctrl** Click 2nd)



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



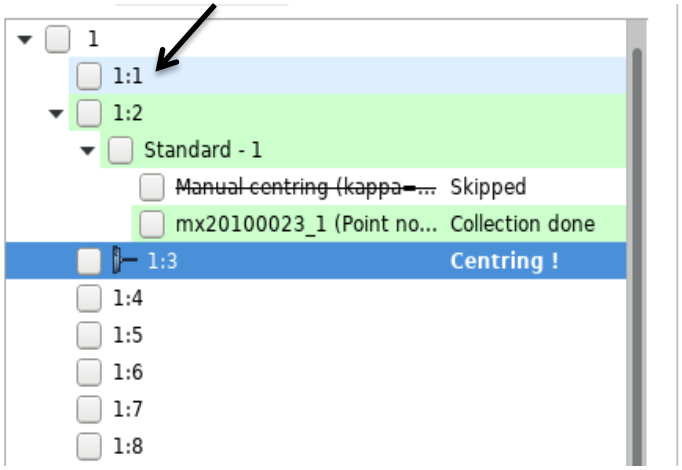
5- Fill acquisition parameters in the helical collection tab



6- Start data collection

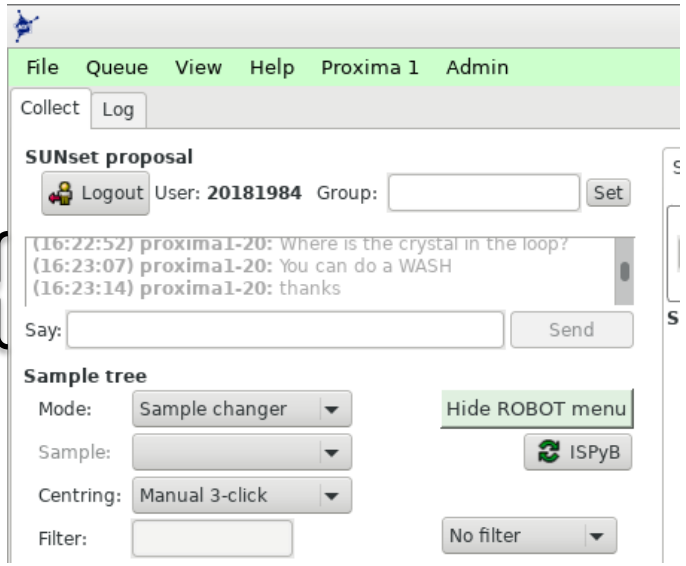
Misc. Features

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



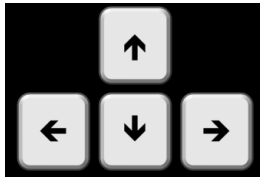
- Above the Tree view a chat window will allow you to interact with the local contact

Chat windows



Shortcuts during centering

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

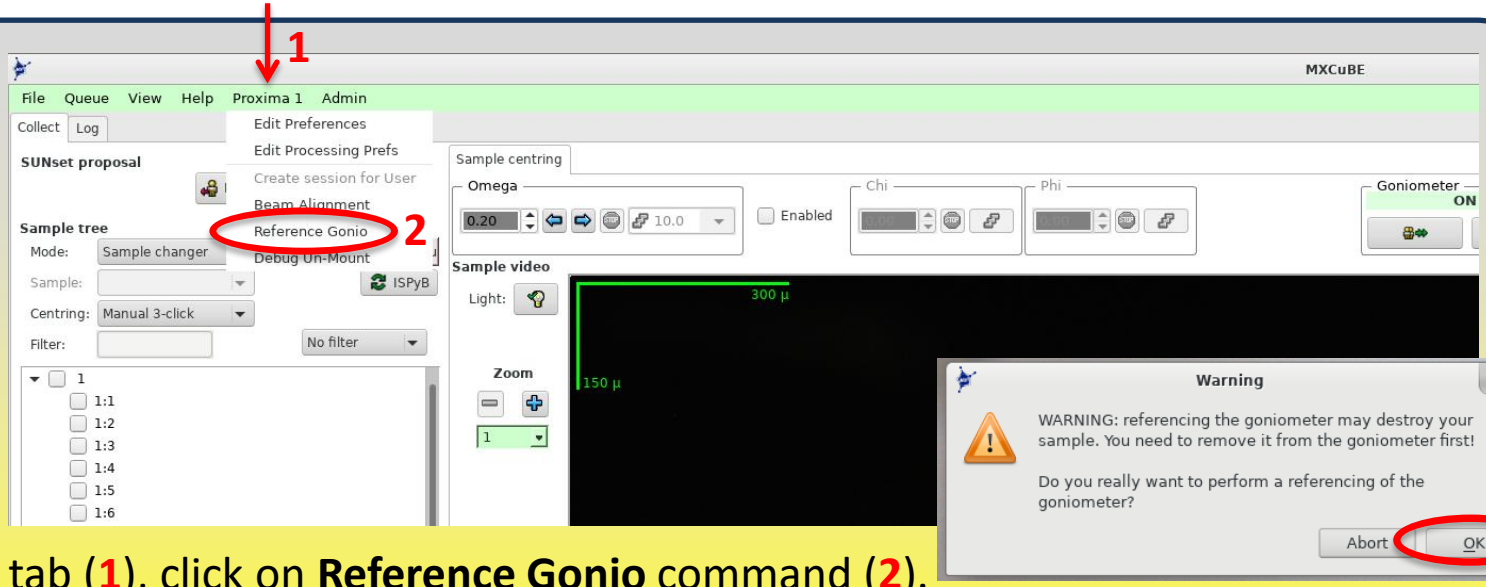


- Keyboard arrows : using keyboard arrows will slide the loop/crystal position within the camera window plane.

Fixes on issues that might happen on PROXIMA1

Issue：Grayed out angle fields preventing the goniometer action

Fix :

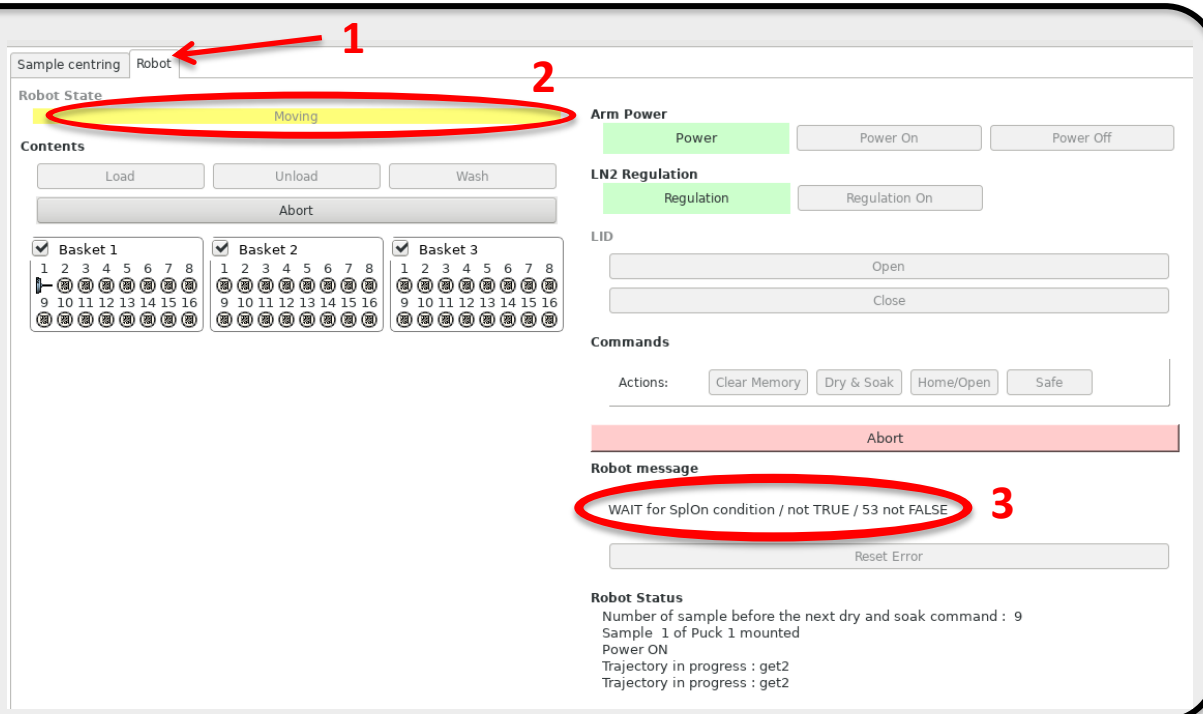


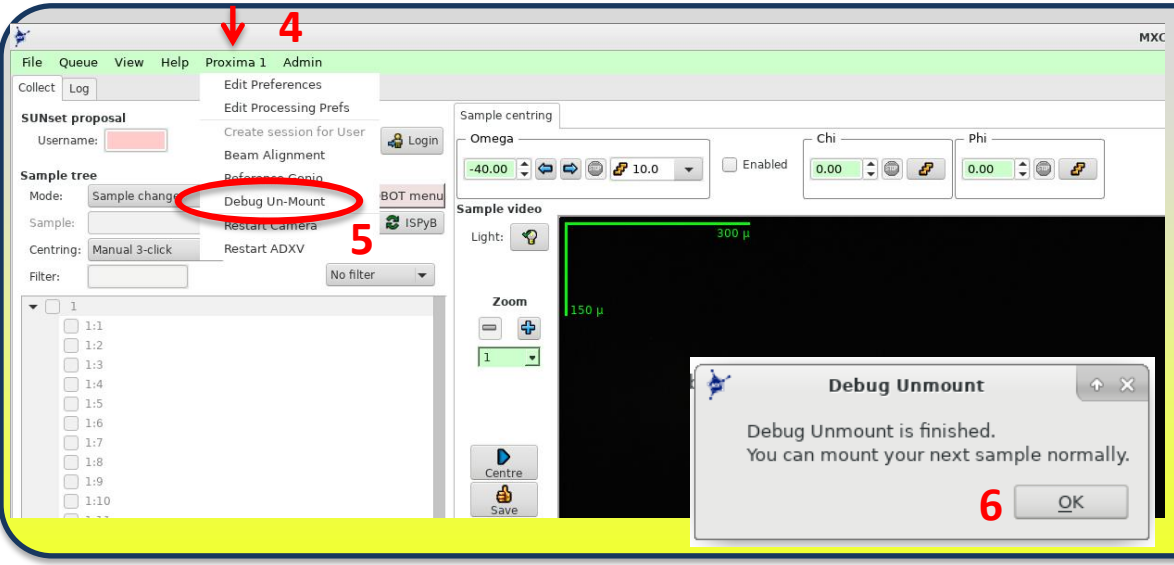
- In Proxima1 tab (1), click on **Reference Gonio** command (2).
- Then Confirm **ok** (3) in the pop up window to launch the referencing procedure
- At the end of the procedure you can go on mounting the next sample (the one on the gonio during the procedure is lost)

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)





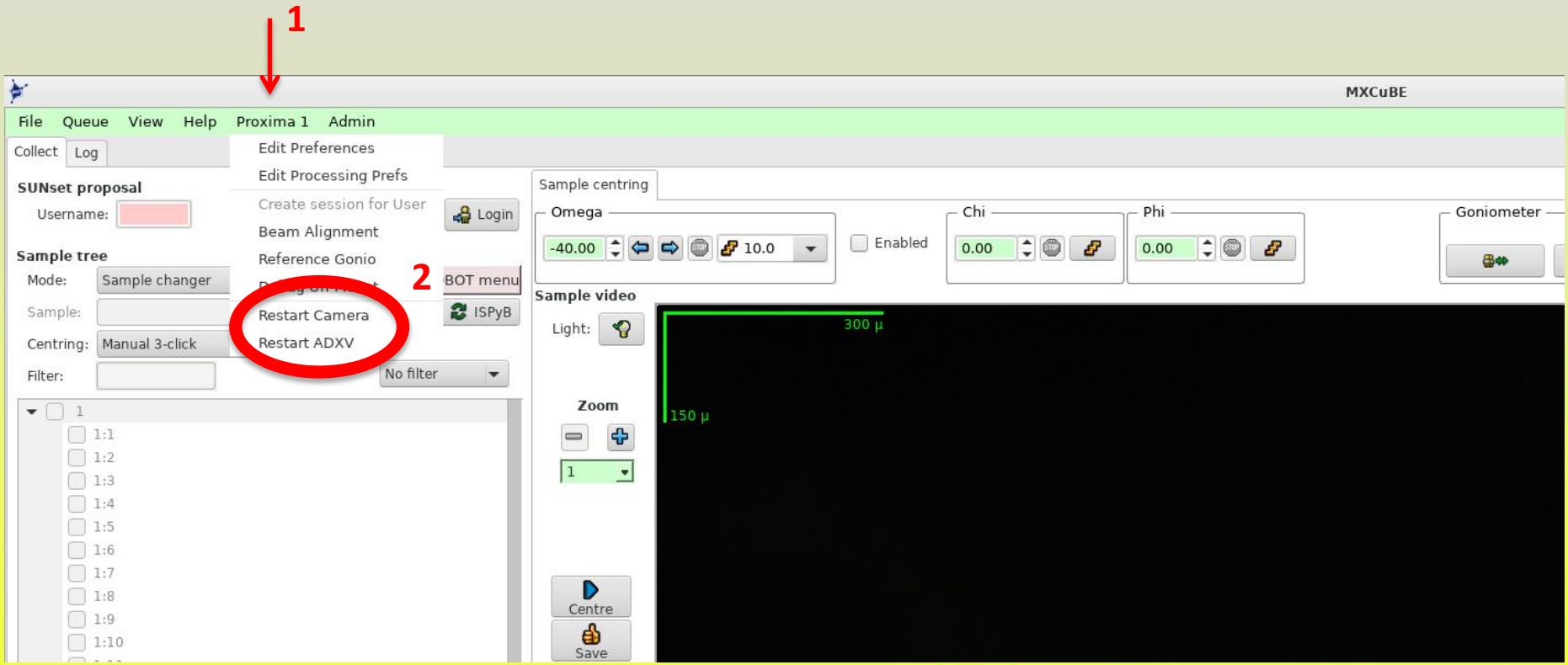
Fix :

- 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 :

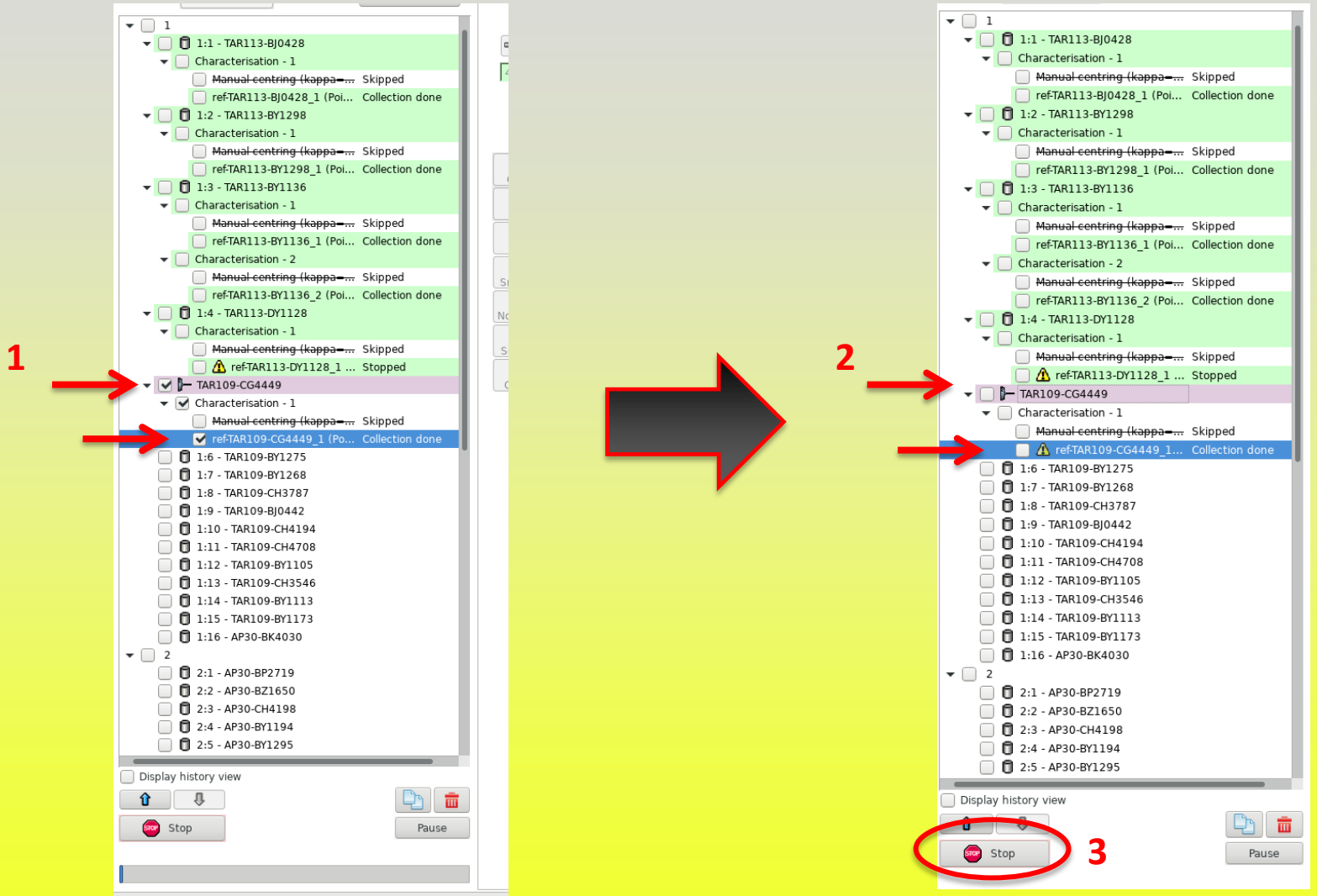
- In Proxima1 tab (1), click on **Restart Camera <u>or</u> Restart ADXV** command (2) accordingly.



Bug : for stopping a started data collection/characterization

Fix :

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

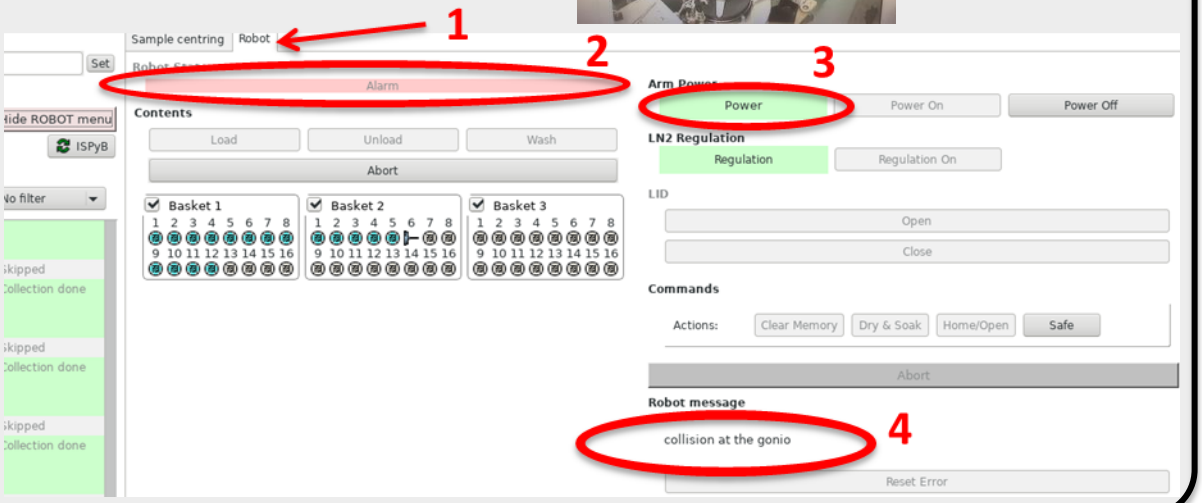


Issue : Robot stay stuck near the goniometer.

- In the Robot tab (1 - after clicking on « Show Robot menu » on the main window-)
- The Robot is in Alarm state (2) and still Power ON (3).

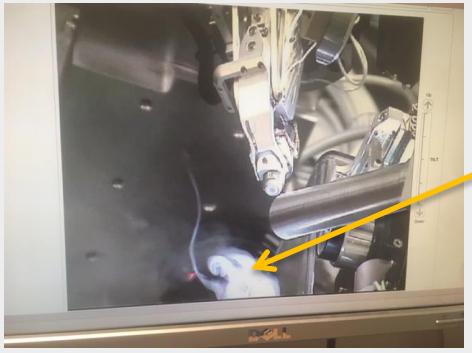
(NB. If the robot is Power OFF : please call your local contact)

- In the robot message field there is the following error message : « collision at the gonio » (4)



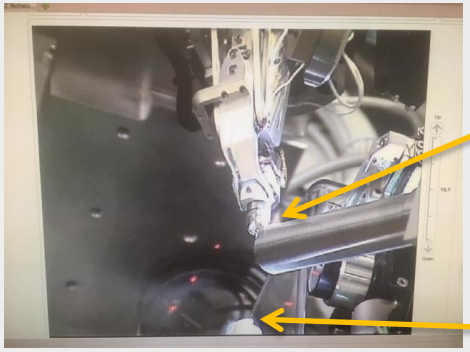
Two cases :

Case 1 : Problem occured in a sample mounting phase.



Sample still in the tool

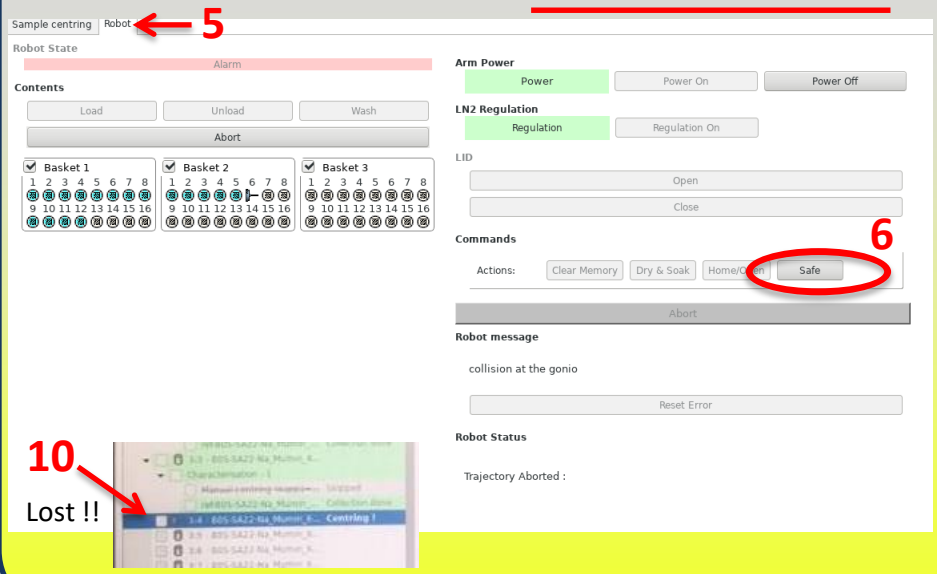
Case 2 : Problem occured in a sample unmounting phase.



Sample still on the gonio

Tool empty

Fix case 1:

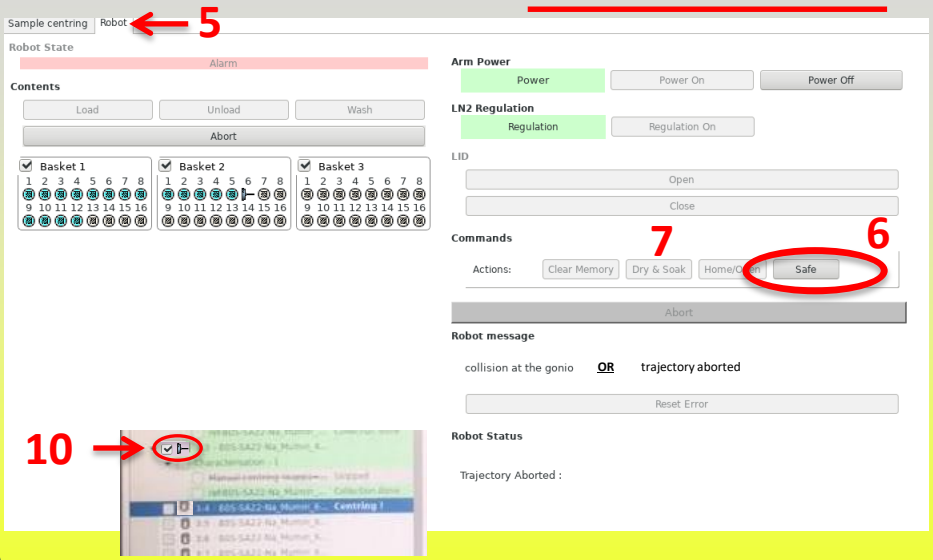


- In Robot tab (5), click on **Safe** command (6). Do this twice if the Safe button is the only one available at the end of the trajectory.

Then, in the sample centering tab, **stop** the centering procedure (8)

- Put the **Light ON** (9) then **OFF**
- Then **call the hall coordinator** (9797) and ask for Procedure Chapter 11.
- When fixed, don't forget to mount the **following** sample (the previous one being lost - 10).

Fix case 2:



- In Robot tab (5), click on **Safe** command (6). Do this twice if the Safe button is the only one available at the end of the trajectory.
- Then click on **Dry&Soak** (7)
- Then, in the sample centering tab, **stop** the centering procedure (8)
- Put the **Light ON** (9) then **OFF**
- Finally, on the TREE menu, **Right click, Unmount** on the mounted sample (10)
- Then you can mount your next sample