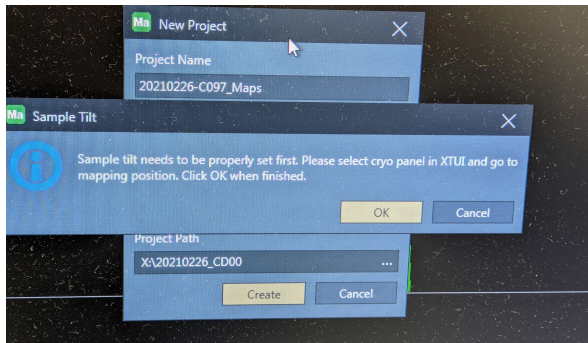


Using Maps for cryoTEM samples

Screening grids

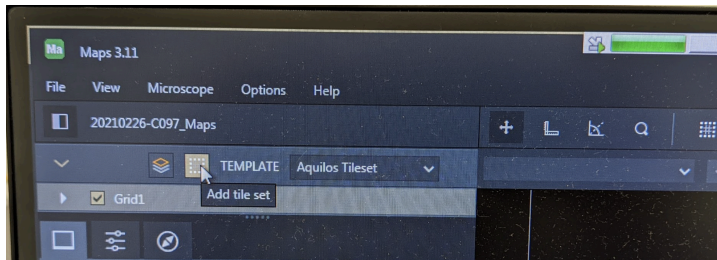
1. Create a folder under the X drive: e.g 20210226_CXX
2. Open Maps (found on the desktop)
3. Add a new project
 - a. Provide project name 20210226-CXX_Maps
 - b. Provide path under the X folder to the folder you created in step 2
 - c. Click create
 - d. You will get a warning reminding you to go to Mapping position in XT, **follow the instructions**



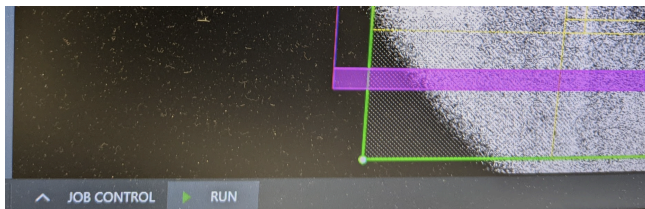
4. Rename "Layer" to the name of you grid or sample etc
5. In xT: Set Mag for the electron beam to the lowest mag possible
6. In Maps: Take a snapshot using the button on the right top corner



7. Add tile set
 - a. Click and drag the tile set to position it over the grid

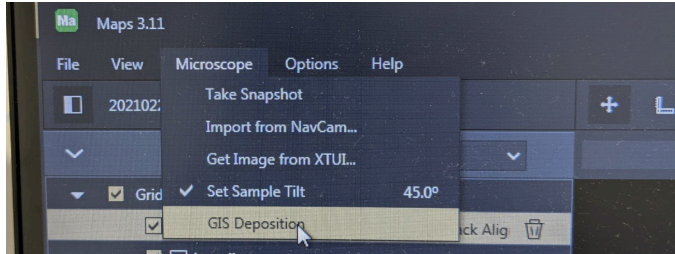


8. Right click on at tile and select drive stage here
9. Go to xT: Do Focus and auto contrast at the mag of your choice
10. Go to Maps: Click run at the bottom



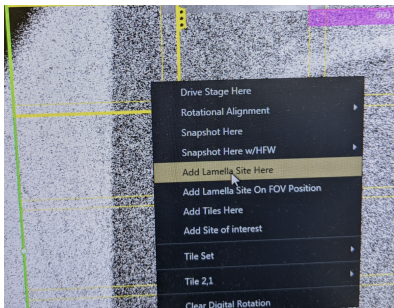
GIS coating

- Go to cryotab in xT, select Grid 1 or 2 and then
- Go to Maps: microscope > GIS deposition and follow instructions
 - Insert need make sure it is warm
 - Start, 6-8 sec of coating, close
 - **Retract needle**
 - Return to stored lamella site

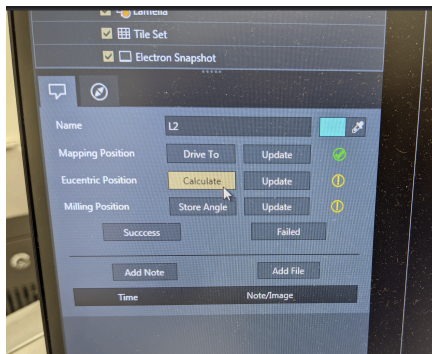


Targeting a cell

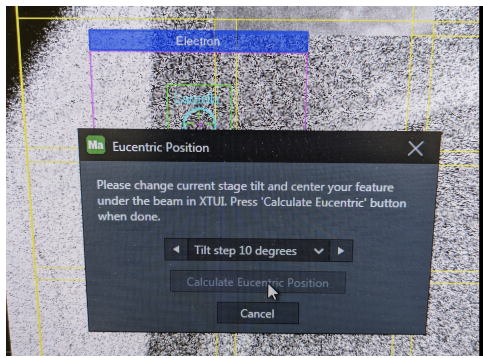
1. In the Maps overview image locate a cell and right click
2. Select create lamella site to add a position based on the image. This adds a marker to the Maps overview. Rename the lamella. (If you move around manually in xT, lamella sites may be added by selecting the FOV option)



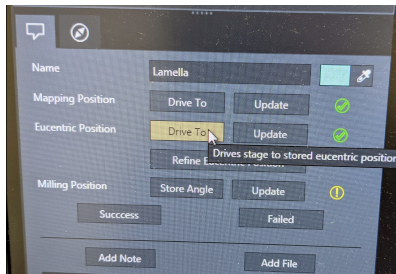
3. Click calculate eucentric position. Verify the cell is in the center of the imaging quad, then click the pop up dialog as requested.



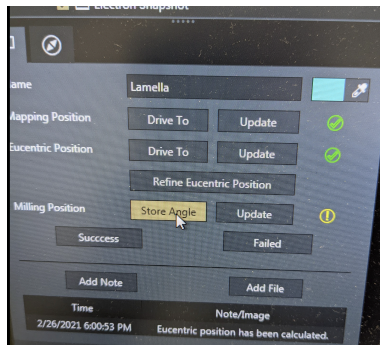
4. Tilt the stage then after the movement has stopped click and center the feature again. Repeat this for up to 30 degrees for more accuracy.
5. Next click calculate eucentric position and the value is stored.



6. Drive to eucentric position and if needed you can refine the position using the refine position



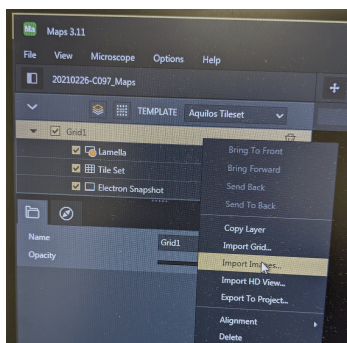
7. Go to xT: Go to Ion imaging and view the cells. It may be necessary to correct with beam shift the relative position of the co-incidence point (i.e. center the cell). This can vary with charging influences from cell to cell.
8. Set the tilt (15-18°) so that you have an uninterrupted view of your cell. Once a suitable angle is reached **store this as the milling angle** in maps.



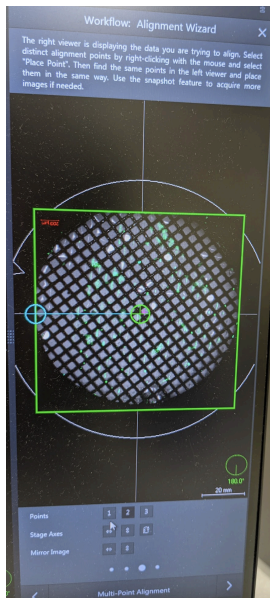
9. This process can be repeated until all the sites are identified on both grids.

Correlate FLM and SEM images

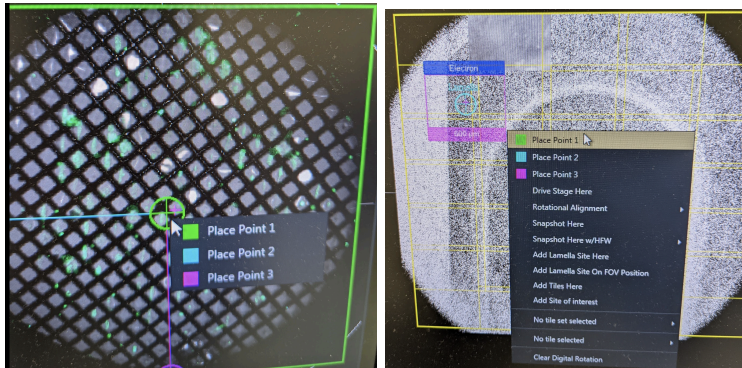
1. Right click on a layer and click import images
 - a. Select a file and click open



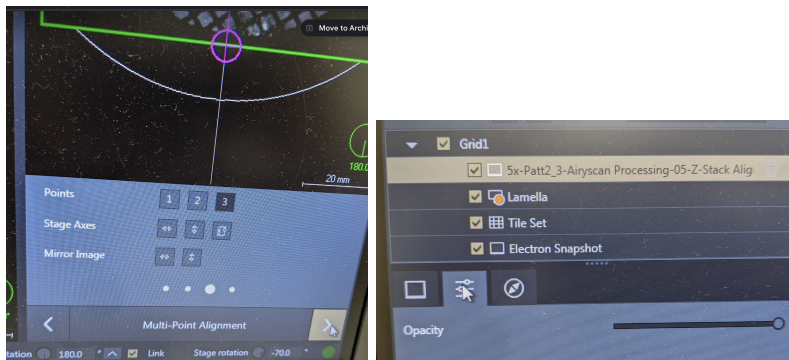
2. The Alignment wizard will open automatically



3. Select the number of point you want for alignment
4. Right click and place points in both the FLM and SEM images for alignment



5. Click on the next button next to Multi-point alignment (this will align the two images), (You can change the opacity of the images to see how good the alignment is)



6. Make fine alignment if needed
7. Click the check mark to finish the alignment

