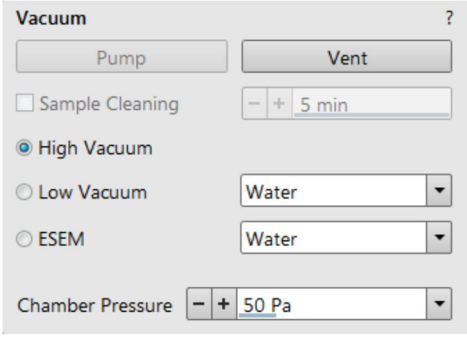
FEI Quattro S Field Emission Scanning Electron Microscope operational procedure

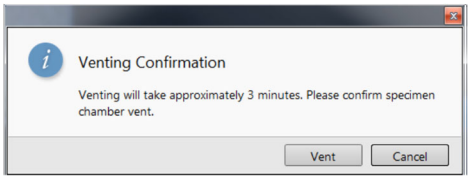
1. Vent chamber and load sample

On the right side of the software controls, click on Beam control page 

Click Vent button

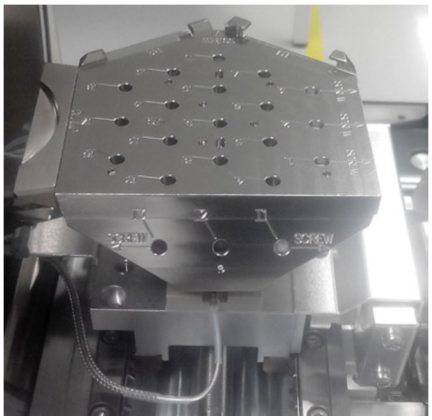


Confirm Vent

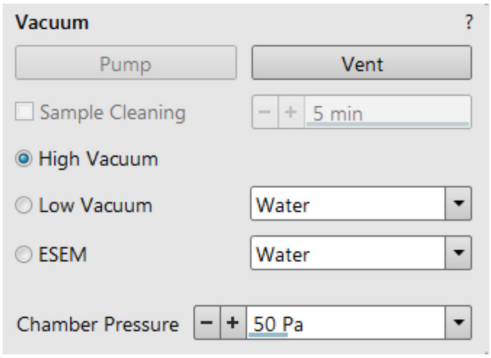


Wait until the sample chamber door can be open.

Load the sample on the sample holder



2. Choose high vacuum or low vacuum and set chamber pressure, then click Pump



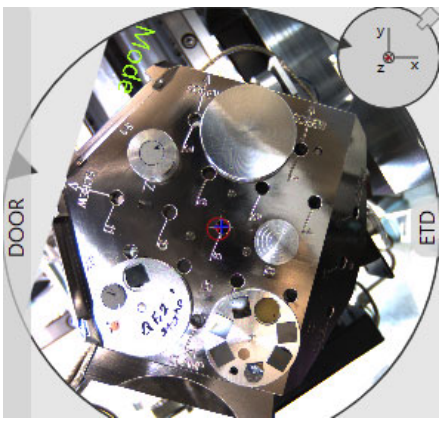
Choose accessary (normally is no accessory, if using low KV cone or x-ray cone, choose appropriate accessary)

Wait for the notation sound and make sure turbo pump is in >99% capacity. Then the vacuum is ready

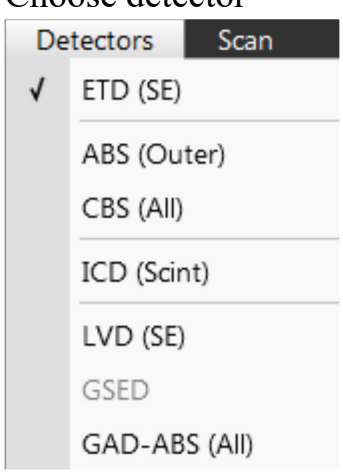
3. **Image acquisition**

   Moving stage: on monitor CCD camera window (sample stage side view window), click on and hold middle button and drag up the stage to about 10mm mark position

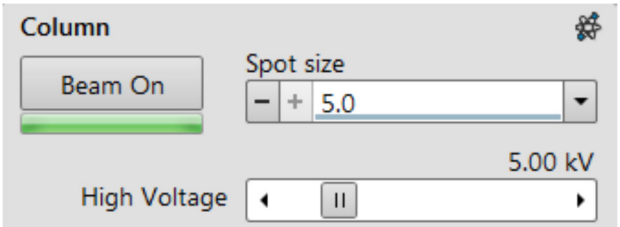
Use navigation camera window (bottom left window) to double click on the interest sample area



Choose detector



Choose beam high voltage and spot size and click beam on button (on Beam control page )



Click on scanning window 1 (upper left conner) and click  to start scanning

Choose magnification on control panel

Choose scanning speed by 

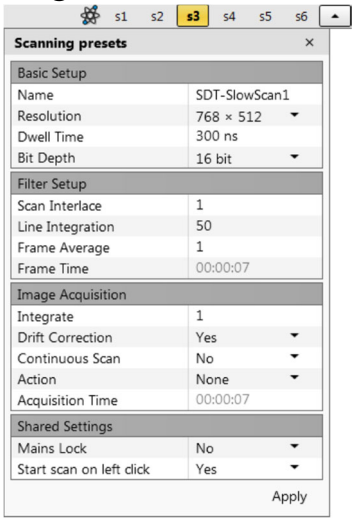
Use auto brightness and contrast button  or the brightness and contrast knob on the control panel to adjust image brightness and contrast.

Use focus knob on the control panel to focus image

Use Stigmator knob on the control panel to adjust image stigmator if necessary

After focus the image, click on button  to link z to FWD

Use Scanning preset to adjusting scanning parameter (resolution, dwell time, line integration) and image acquisition parameter (integration) to get good image.



If using scanning preset: take images by use Ctrl+scanning preset button (eg. S1) and click pause button  .

If not using scanning preset: take images by click pause button  .

Go to file -> save as to save and name the file in /shareddata folder/user folder

4. **When finished:**

Off beam

Vent column and take out sample

Pump column to high vacuum