

Acquiring an image using the phosphorous screen

1. Check the vacuum in the octagon and make sure the vacuum is lower than 20 Log, if so you can open the column valves.
2. Load the alignment files for the FEG and the operating mode of the microscope.
3. Open the column valves and check for a bundle.
4. Press the eucentric focus button to reset all displacements.
5. Using the sample z-height buttons try to minimise the contrast of the picture.
6. Further minimise the contrast of the picture by magnifying and then using the focus knob.

High Resolution TEM image using digital Camera

1. Make sure the screen current is roughly less than 10 nm.
2. Retract the phosphorous screen using the R1 button.
3. In the Velox camera software press the play button to start acquiring.
4. Open the fast fourier transform window on the top right.
5. By pressing the stigmator button and using the multifunction knobs correct the stigmator such that there are concentric circles visible in the FFT. Using the focus buttons make the circles larger. The most detail can be achieved if there are bright spots or rings on the edges of the FFT.
6. Acquire a HRTEM picture using the camera button in the top toolbar.