

## Notes from EDS detector installation on Auriga 60

1. Close "Camera Scope" window before opening Oxford software (light will flood the detector).
2. Use a working distance of 8mm (different from same detector on FEI because of the mounting flange)
3. Use the SESI detector as Signal A. Note that the Aztec software can display signals from two detectors (e.g., SESI as Signal A and NTS BSD as Signal B).
4. Use 20kV (depends on elements).
5. Under "Microscope setup", the deadtime should be optimized to 30-50%. The deadtime should not be so high that the scaling bar turns grey.
  - ➔ If the deadtime is too high, select the Gun tab, check the "Optiprobe" box and reduce the Iprobe current value until the deadtime reads 30-50%.
  - ➔ Note that with the standard aperture of 30um, the Iprobe current is 450pA; the current has to be reduced to about 200 pA to optimize the deadtime. When the current is lowered that much, the instrument automatically switches the aperture to 20um (which has an Iprobe current set to 156pA). As a result, it might be best to select an aperture of 20um when using the EDX.
6. During image acquisition, keep the SEM scanning (no need to pause). The EDX takes external control of the SEM. If this does not happen automatically, turn off the beam blanker controller located behind the table or go to the side panel, select "Ext Scan Control" and press on "Ext ON" (this will manually put the SEM in external command).
7. During testing, found that the mag displayed under Options/Microscope controls was incorrect. An algorithm provided by Zeiss and Oxford was used to enter a correction factor. The kV and the WD were being communicated correctly by the SEM.