

PHPS_312

High Magnification II

Assignment

Spherical Aberration - the Correction Collar

Objective:

Using the 40x APO Nikon dry objective and the appropriate condenser, produce a series of four images using proper and improper settings on the spherical aberration correction collar. The range (setting) may include setting .14 and range up to .23 and should create a series of pictures one of the 3 demonstrates optimal image contrast. Photograph 4 different samples.

Purpose:

Using very high quality objectives with magnifications of 40x or higher that are dry, can be tricky to operate. This exercise will give you an opportunity to gain experience in determining and establishing the optimal setting (cover slip) for a specimen as influenced by the spherical correction collar located on a 40x APO.

Assignment:

Using any specimen, produce a series of pictures of the same region of the sample using the high dry 40x objective that posses a correction collar. These pictures should be made at:

- the correct setting
- images of - at a minimum - 2 other settings,
one on either side of correct
- an image of a micrometer

This series of files should then be processed and composited for display

On the file, present the images in professional fashion identifying each images collar setting and the identified cover slip thickness, sample and other relevant information.

A bar scale will also be required as part of your submission.

Submission:

Composite files made across 4 different samples (a composite file would be defined as containing 3 images made for each sample