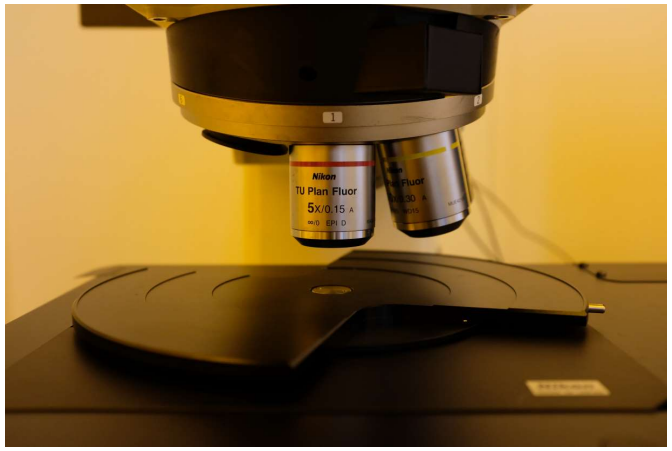
1

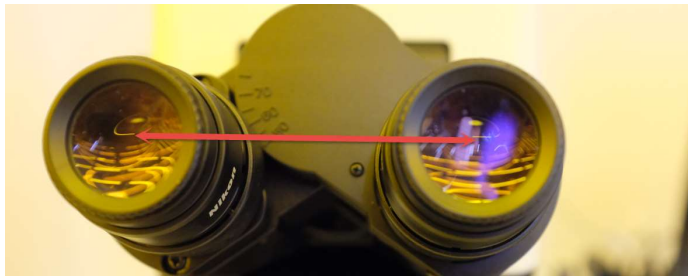
Nikon LV150
(No DIC)

ALWAYS start and **end** with lowest power objective!

Goal – Do NOT touch sample with objective lens.
Why? – To avoid lens damage or sample damage (100x objective is $6K)
Lower power objectives generally have longer working distances (20X is an exception)



- **Adjust intraocular distance**

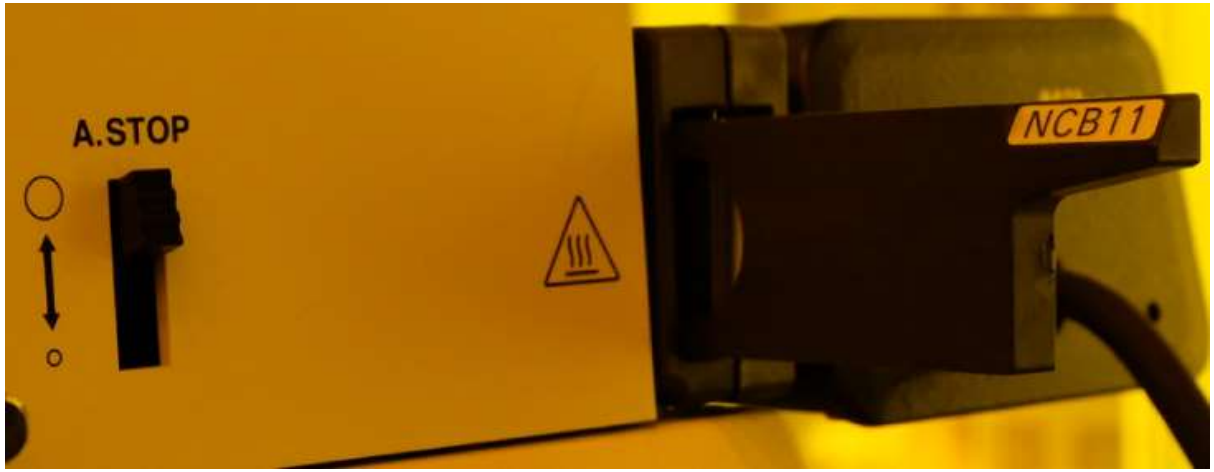


- **Adjust eyepiece focus if needed**





Resist safe filter **IN** (yellow light)



Resist safe filter **OUT** (white light)

Place sample on stage

3

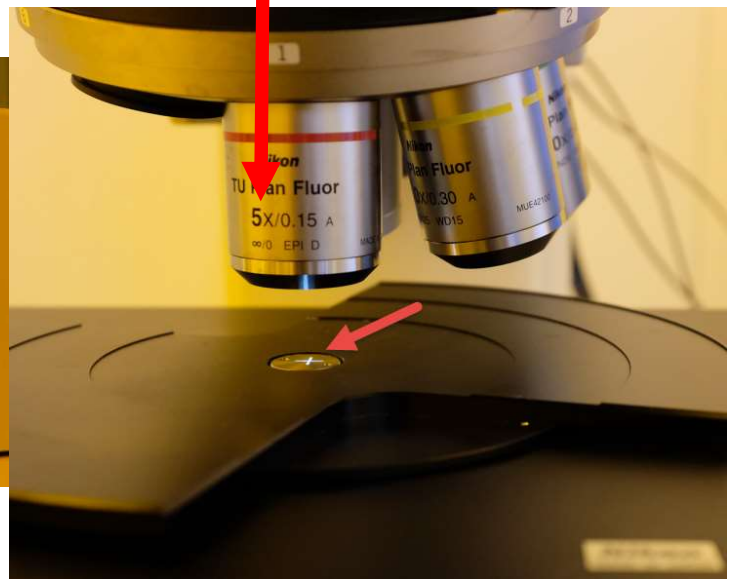
- Turn on LED lamp

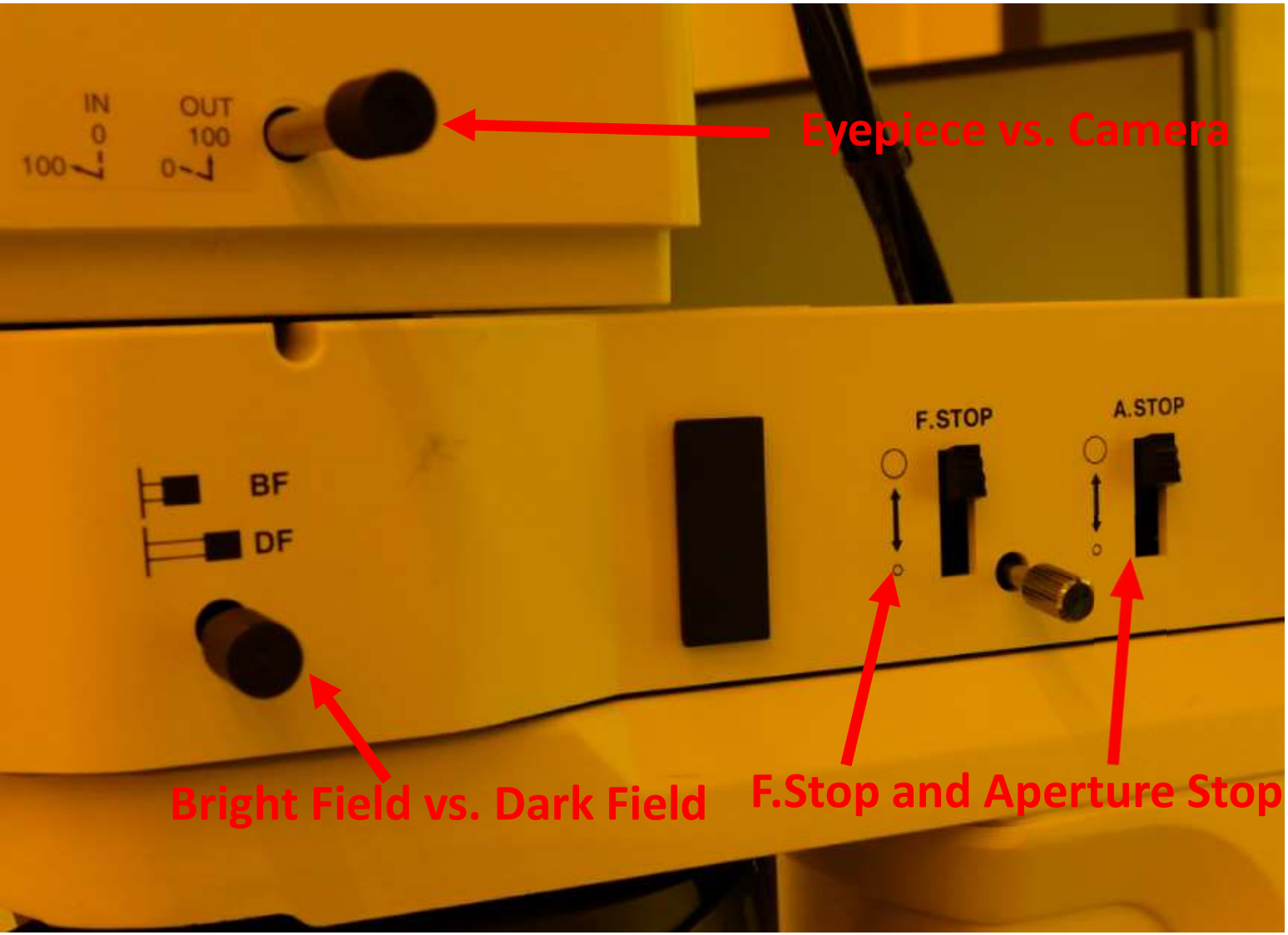


- Make sure Aperture is fully open
- Close F. Stop partially to cast shadow to find focus



- Focus on substrate using semi-closed F Stop and lowest power objective

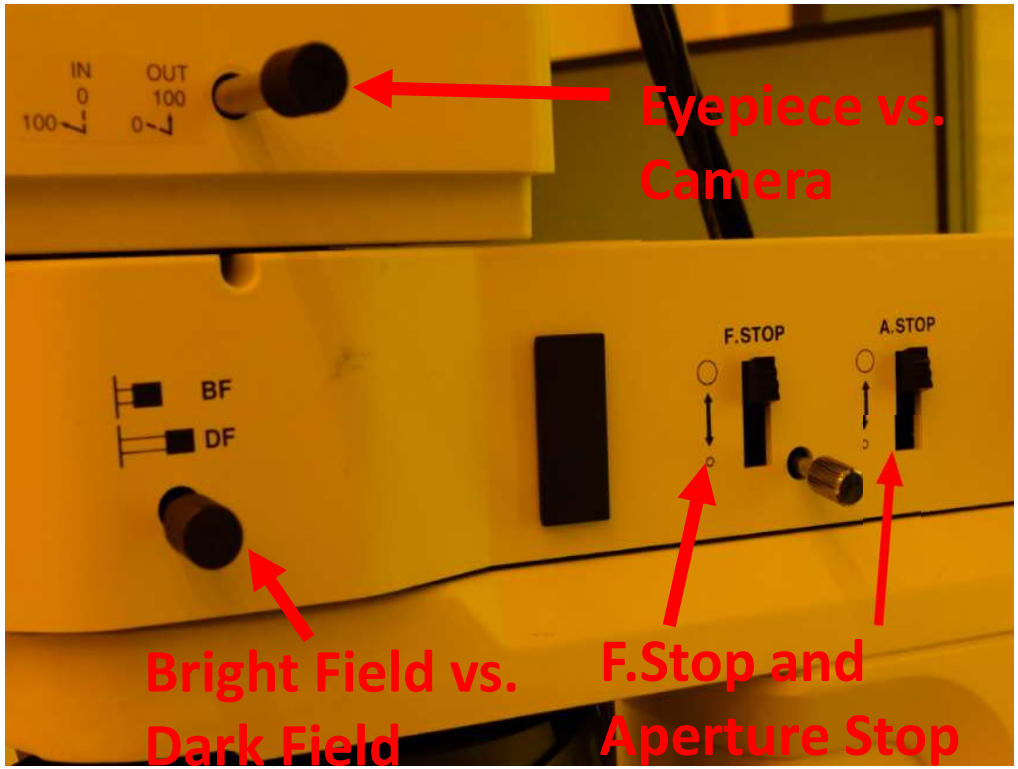




Steps to get an image

4

1. Rotate lowest power objective into place
2. Set mirror to Eyepiece or Camera
3. Push BF/DF rod in for Bright Field
4. Open Aperture stop (up)
5. Close F Stop half way and focus on shadow on substrate, then open F Stop back up
6. Use resist safe yellow filter if using resist



Aperture Stop
Limits ANGLE of illuminating light. Fully open = best resolution. Closing Aperture stop reduces stray light and can increase contrast for some spatial frequencies.

Field Stop
Limits field of view. Partially closed Field Stop will cast a shadow on a reflective substrate, allowing easy focusing. Start with low mag objective.

Eyepiece/Camera
Mirror that directs 100% of light to either the camera or the eyepiece.

Bright Field/Dark Field
When out (DF), illumination light travels outside the lens and illuminates the substrate at angles higher than the lens can collect, therefore only scattered light is collected. Useful to find particles and scratches.

Move stage in X/Y

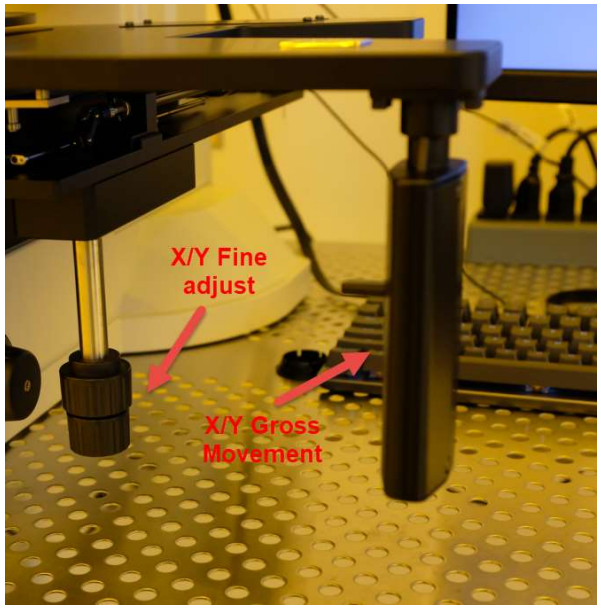
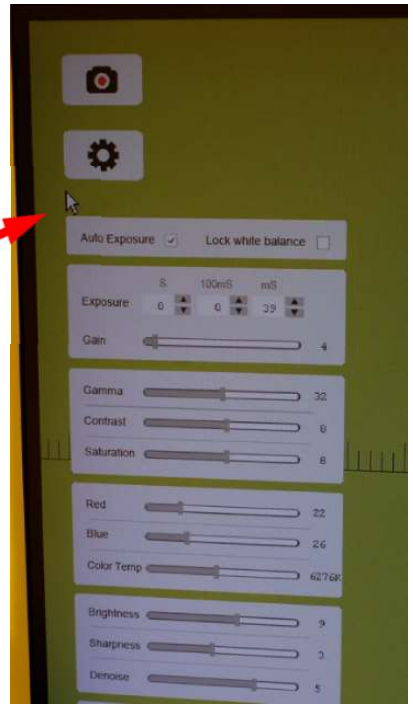


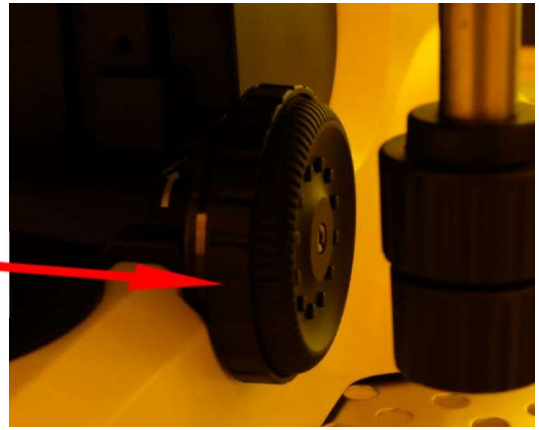
Image capture is NOT available on this microscope.

It is possible to adjust the image on the monitor by moving the cursor to the left edge of the screen which will bring up a menu.



Does the focus drift?

- Adjust the Torque ring counter clockwise



Is the stage stuck?

- Adjust the Clamp ring clockwise

