

# Attention SLIM Users:

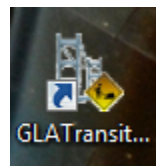
*We have recently replaced the SLIM laser. There is a new procedure for turning on and off the laser.*

## **Laser Start-Up Procedure:**

1. Turn the key on the laser controller from “STANDBY” to “ON”. The laser controller, shown in the image below, is located on the platform below the table, and it is marked with red tape with a “1”. Turning the key is the only thing you will have to change using the controller itself. Everything else is through the program described in the following steps.



2. The controller takes about 5 minutes to ramp up the power. It reads a current that ramps up to around 45 A, and then it reads a percentage ramping up to 100%. When it is ready, the screen on the controller reads “Status: OK”.
3. Open the new laser control program on the computer desktop. The program is called “GLATransitionGUI”, and the icon is shown below.



4. The laser control program looks like the following screen shot. The only things you should need to change are the wavelength (by typing in a value in the upper right or by clicking one of the preset wavelengths) and the status of the laser shutter.

The screenshot shows the Chameleon Ultra software interface. At the top, it displays 'Chameleon Output Power' as 2518 mW and 'Power: 2518mW'. The wavelength is set to 890 nm. A warning icon indicates 'Warning ! Shutter Open'. Below this, there are buttons for 700, 740, 780, 800, and 890 nm. The main area shows 'No Spectrometers found' with a lizard icon. On the right, there is a 'Status' section with 'Laser On', 'Ready', and 'No Fault' indicators. Below that is a 'Shutter Control' section with a 'Shutter Open' button (a yellow triangle with a black sunburst) and a 'Close' button. At the bottom, there is a 'Control' section with 'Lock Front Panel', 'Dither Hold', and 'Initialize' buttons. Three callout boxes with red arrows point to specific controls: 'Wavelength Set' points to the wavelength input field, 'Wavelength Presets' points to the wavelength buttons, and 'Shutter Control' points to the 'Shutter Open' button.

**Wavelength Set**– Type your desired wavelength.

**Wavelength Presets** – Left-click to change to one of these wavelengths or right-click on a blank box to add one of your own.

**Shutter Control** – Left-click to open or close the shutter. When opening the shutter, a pop-up window will ask you to confirm.

5. The laser should be at 800 nm when you begin. Allow the laser to sit for 5 minutes at 800 nm.
6. Tune the laser to 700 nm. Allow the laser to sit at 700 nm for 5 minutes.
7. Tune the laser to the desired wavelength for your experiment. Wait 5 minutes.
8. Open the shutter by clicking on the button shown above and begin your experiment.

### Laser Shut-Down Procedure:

1. After doing the pollen grain calibration, close the shutter with the shutter control as shown above.
2. Tune the laser to 800 nm, and close the laser control program.
3. Turn the key on the laser controller back from “ON” to “STANDBY”. The screen should read “Status: Starting” for a short time before reading “Status: Standby”.