Single Position Time Series on the LSM710

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IMPORTANT INFORMATION TO AVOID FOCUS DRIFT

In order to stabilize the focus one must:
1. **Have whole microscope on for 2 hours before starting any experiment.**
2. **The sample should sit on the microscope for 15 minutes before you start imaging.**

If you are going to do a live cell experiment in the morning then it would be best to keep the microscope on from the day before.

The following items that are critical to turn off in this scenario:
1. **X-Cite Lamp power switch.**
2. **Lasers turned off via software.**
3. **Argon Laser toggled <u>and</u> key turned off.**
4. **Computer turned off.**

1. **Set up your sample as you normally would for imaging.**
2. **Check Z Stack, Time Series and Positions Boxes.**
3. **In the Z stack box, set the Z stack by selecting Center.**
4. **Click Center.**
5. **Select the number of slices you want. It must be an odd number.**
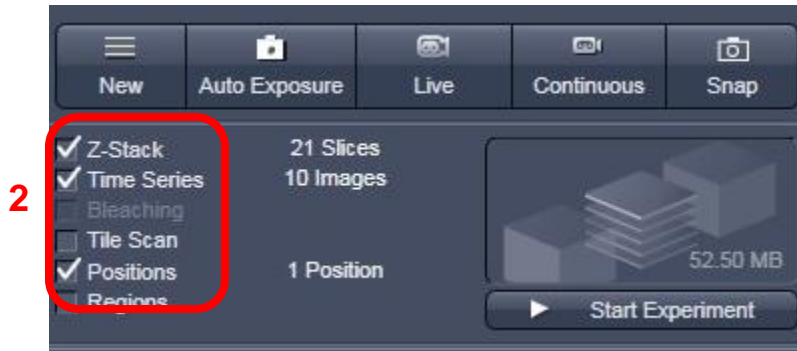
6. **In Positions Box check if any positions are listed, if so click the Remove All button.**
7. **Click Add to add your current position.**
8. **Double check x, y and z numbers in Positions window with x, y and z numbers in the Stage [x and y] and Z-Stack [z] windows. They should match.**
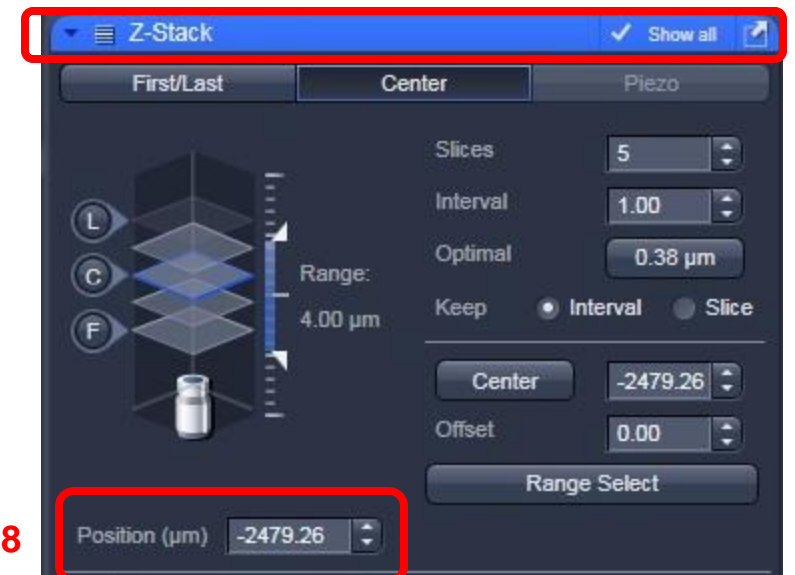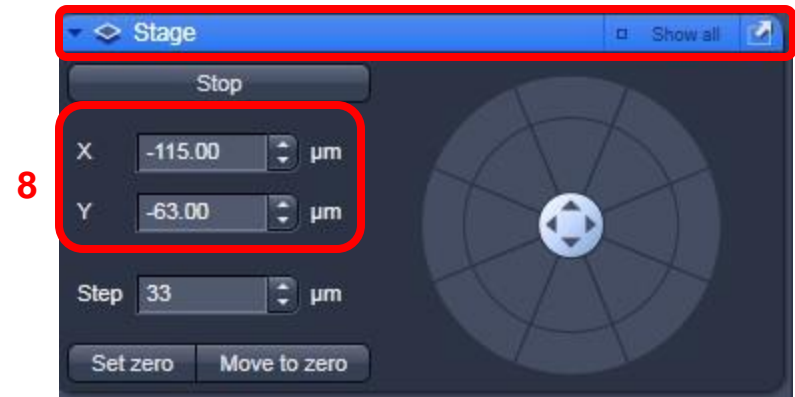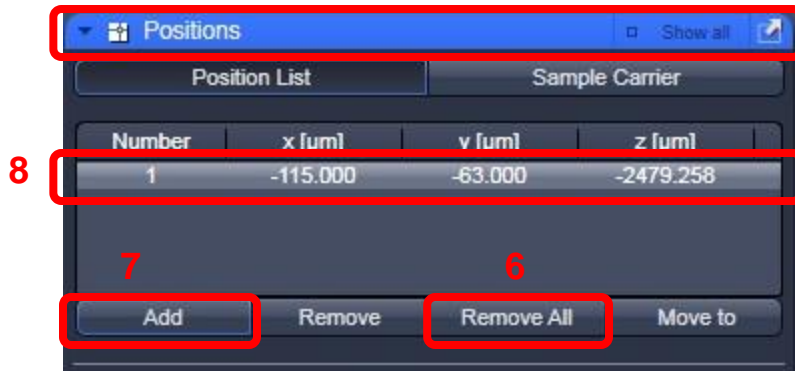
9. **In the "Time Series" box: Select the number of images you wish to take in "Cycles" and the time between each cycle in "Interval." You can change the increment of interval in the pull down menu [red arrow]. Choices are msec, sec and min.**
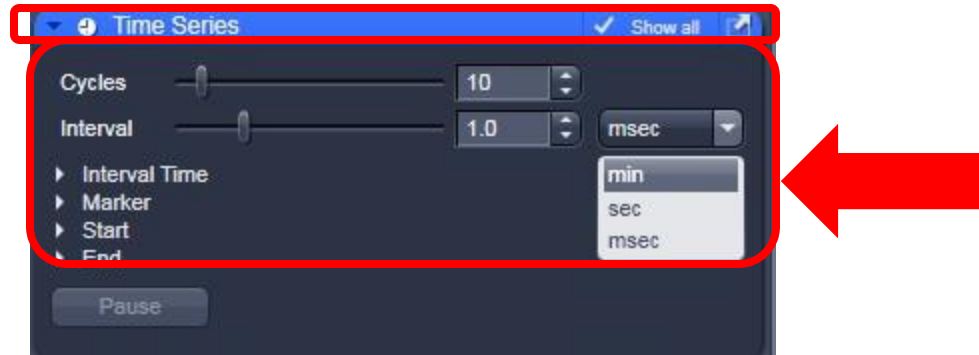
10. **Click "Start Experiment" to begin imaging.**

Results:

11. **The image in Gallery setting shows each image cycle.**
12. **In the Gallery Tab T for Time is selected.**
13. **In the Dimensions Tab you can now use the Z Position slider to see each image at each slice.**