LCAM manual, Zeiss Celobserver (A2.34)   *version: Mar 2019, AC*

Contact person: Anna Chertkova, C2.267 (+ 8366), A.O.Chertkova@uva.nl
2nd contact person: Joachim Goedhart, C2.264 (+7774), J.Goedhart@uva.nl
**Information microscope:** http://www.lcam-fnwi.nl/facilities/zeiss-cell-observer

*Before using the Cell observer microscope, the user (and co-workers) should have had the official intake discussion with the LCAM-staff, succeeded the confocal training course & exam and had an individual training at the Cell observer by the LCAM staff. **Bookings** can be requested via cam.microscopy@gmail.com*

Start up procedure
1.   Turn on the black multi cable power strip (multi plug). By switching on the multi plug the heating block, microscope body and optical power supplies will turn-on automatically.
2.   Turn-on the ARC lamp power supply.

3.   Open the "*MetaMorph*" software at the PC, a desktop icon is available.
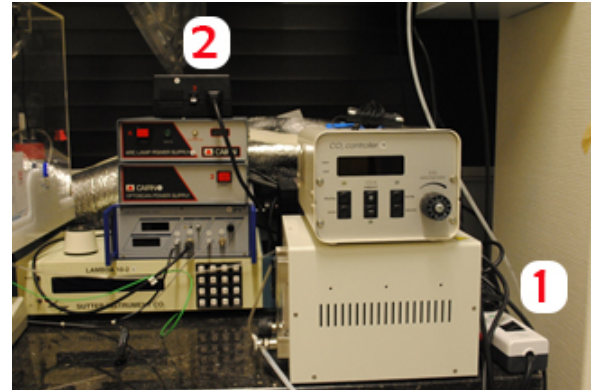
Main operation
4.   Never store data on the local harddisk, all data should be stored at the dataserver. Data present on the local PC will be deleted without further notice. Be aware that the storage of data on the sever will be your own responsibility as well. Although there is a regular backup of the server we will not take any responsibility for lost or damaged data, so make backups yourself. Contact Mark Hink in order to get access to the data-server from your office computer.

5.   Login using the green **Connect dataserver** icon at the desktop: Type your userID (UvAnetID), group and password.
After succesful login a network drive U:\ will be visible where you should store your data.

6.   To be able to make a measuring set-up click on **Devices** button in the menu panel of MetaMorph software. Then choose "**Configure Illumination**" to be able to select the filters of interest.
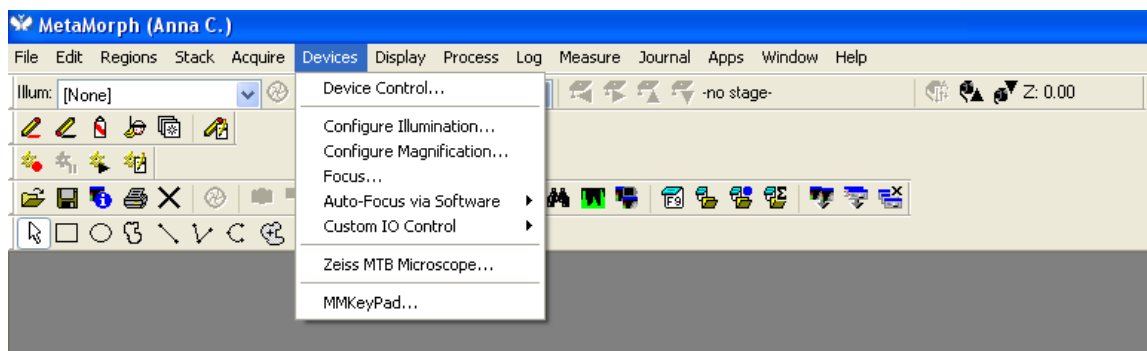
7. To be able to visualize your fluorescent protein through the ocular you need to select the emission filter with indication "*visual*" in front of its name.
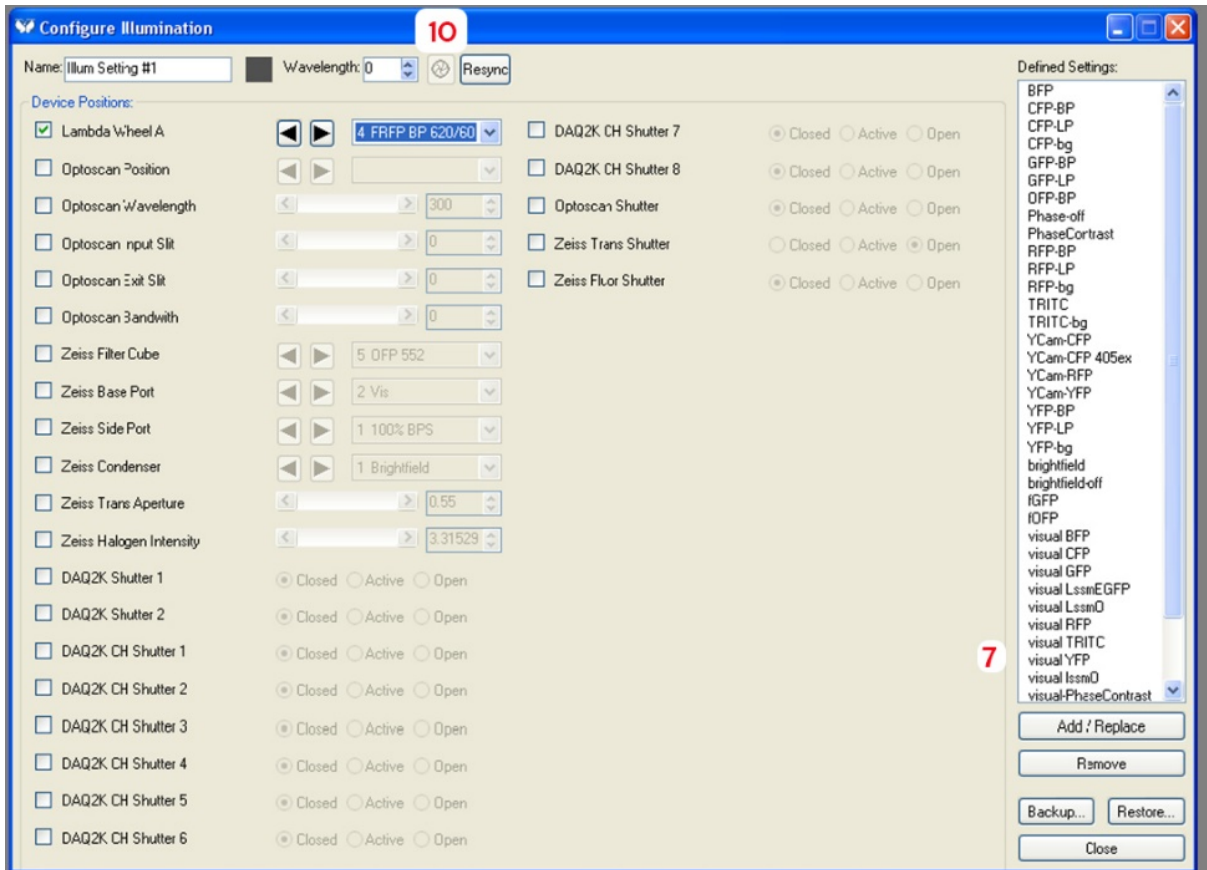

8. To make the set-up for your experiment go to "**Apps**" and choose "**Multidimensional acquisition**".

9. Choose the settings for your experiments and the needed emission filters. To save your acquired data you need go to "**Saving**" and annotate the location at your folder at the data server (called *samba*server) where every image will be saved automatically.
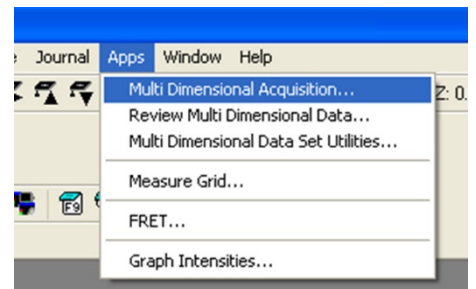
10. When using oil-immersed lenses: Only use **Zeiss oil** (and NEVER any of the other brands). Ask the contact persons for a refill if needed.

11. To be able to visualize the cells on camera (PC) press the "**Shutter**" button in the "Configure Illumination" window to open the shutter.
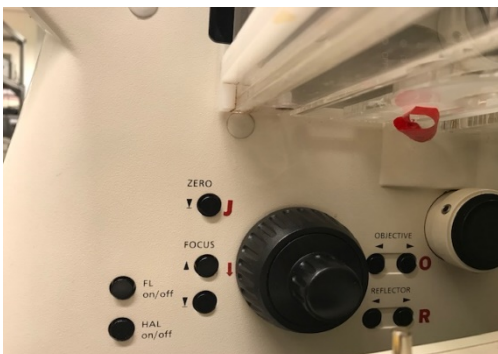
12. Open the manual shutter at the microscope body to visualize cells via the ocular.
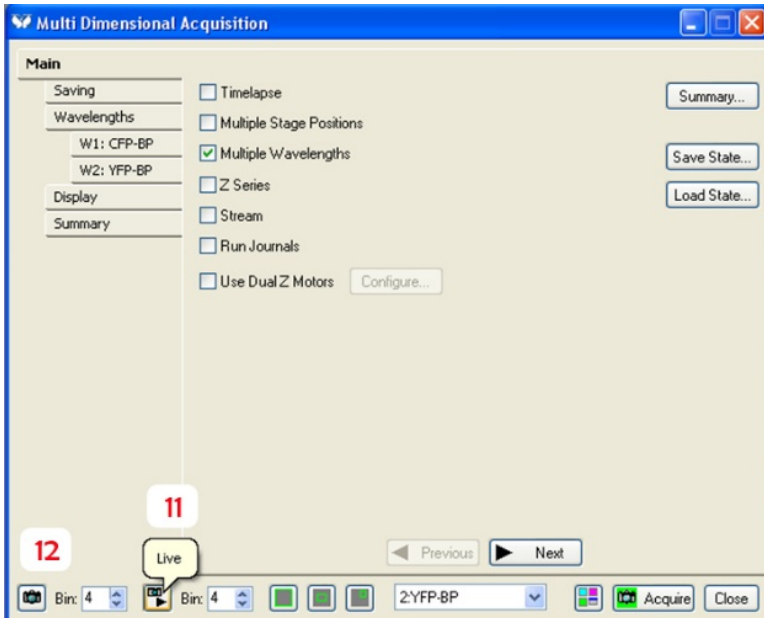
13. To adjust your sample before the measurement use the "**Live"** button in the Multi Dim. Acquisition window.

14. To start your experiment press "**Acquire**" in the "Multidimensional acquisition" window.

15. A single image can be acquired using the "**Snap**" button.

16. For phase contrast images the proper PH ring (PH1 or PH3), corresponding to the objective ring has to be selected in the upper filter holder in the main software. For more info go to the contact person.

===

Shut-down procedure

1. Disconnect the link to your folder at the SILS-S0 dataserver using the **red Disconnect dataserver** icon at the computer desktop.
2. Ensure that the shutters on the microscope body and in the software are closed.
3. Turn-off the MetaMorph software by clicking on the "File" menu and then choosing the "Exit" button.
4. Switch-off the ARC lamp supply and the multi cable plug.
5. Clean the objective with special lens paper and leave the benches clean, f.e. remove sample holders, flasks, tubes with sample solutions and ice buckets.
6. At the end always check whether there is no light coming out of the microscope lens, that will prove that the shutters are closed.