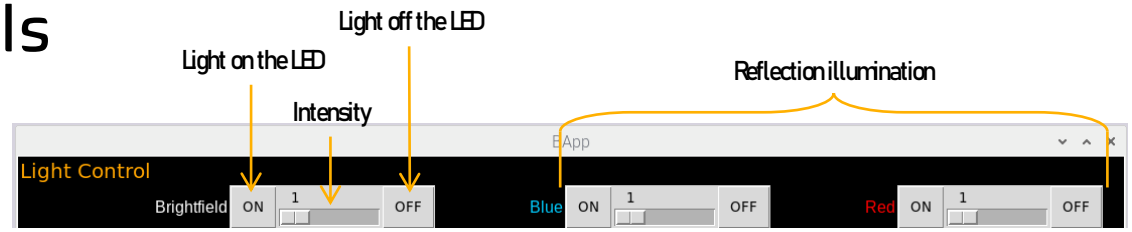
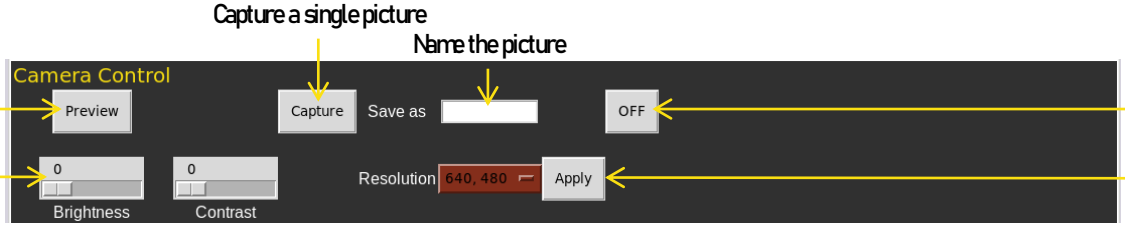
BApp details



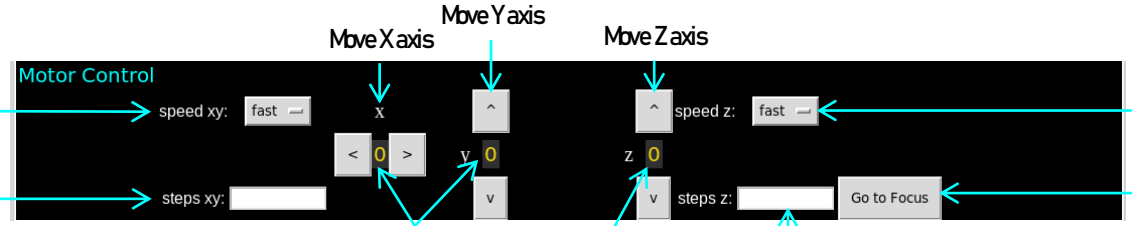


Turn on the camera preview

Control of brightness and contrast of the camera preview

Turn off the camera preview

Choose the picture resolution (1900x... default)



X and Y motor rotation speed

Number of steps for x and y motors

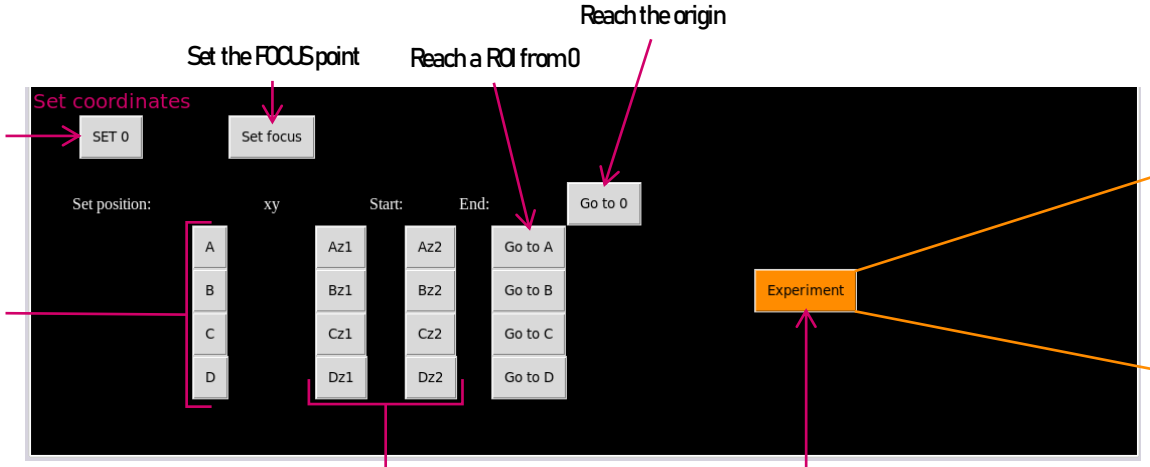
Stage position x, y

Objective position

Z motor rotation speed

Go to the FOCUS point

Number of steps for z motor

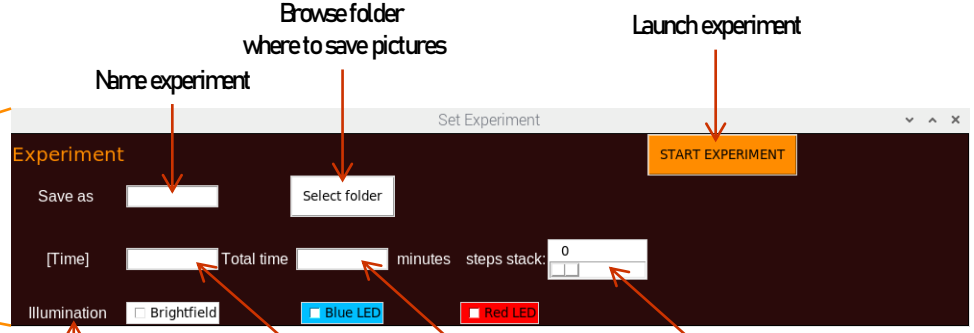


Set the origin of the stage

Define the XY coordinates of ROI

Set the stack boundaries

Open the experiment window



Which illumination?

How many times does it take pictures?

How long does it between 2 sets of pictures?

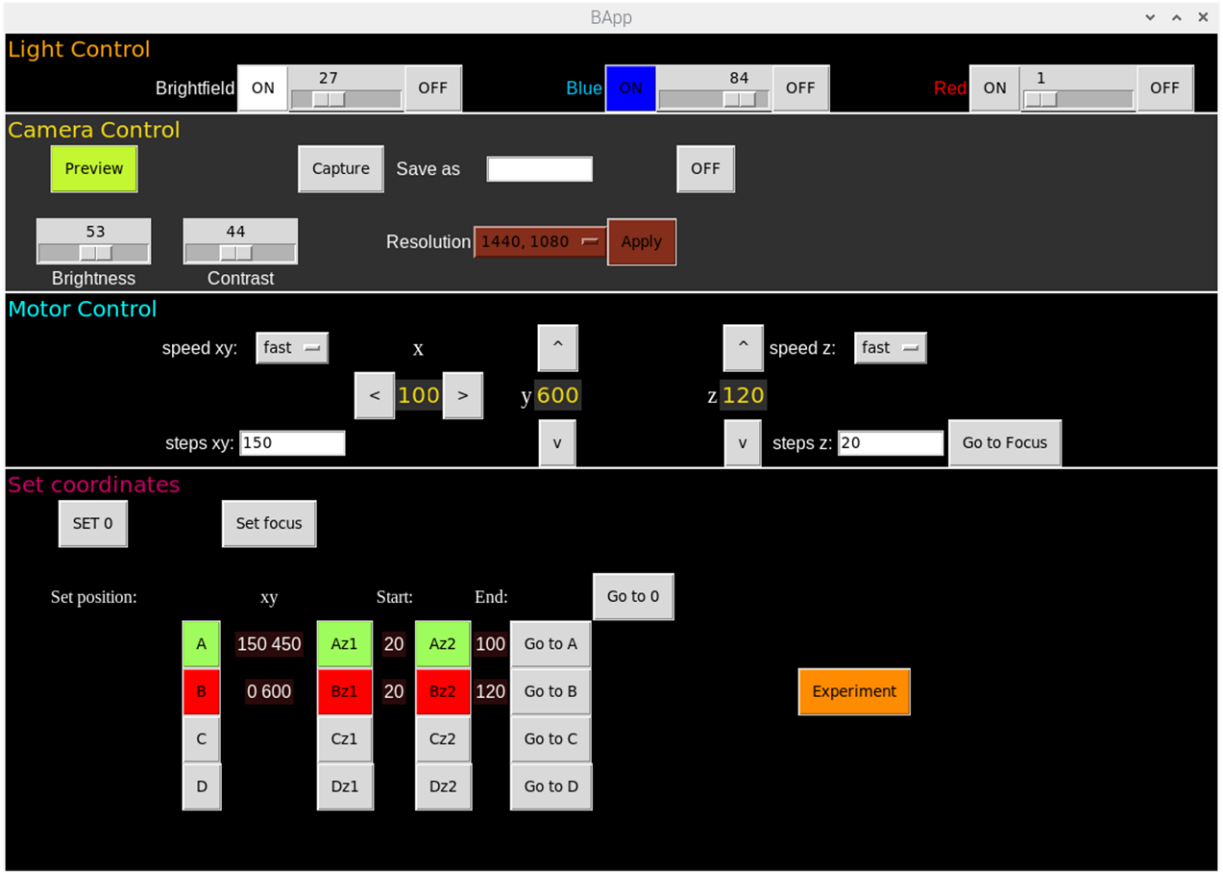
How many Z steps between pictures for stacks?

XY AXIS:
The stage control is based on a relative origin that the user defines. It is also called 0.
The ROI coordinates are relative to the 0 and each other (the A depends on the 0, the B on the A, the C on the B...). The user should choose A as first ROI, B as second...

Z AXIS:
The FOCUS point correspond to the lowest point of z axis. During an experiment, the z goes back to the FOCUS before changing xy position (to preserve the objective). It is important to wisely choose the FOCUS point to not loose to much time between ROIs.

STACKS:
As the z axis goes from the bottom to the top, the z1 position should be lower than the z2. Moreover, z1 should be defined before the z2.

Example:



Both LED (brightfield and blue) are light on. They have different intensities (brightfield: 27, blue: 84).

The camera preview is visible. Brightness and contrast have been adjusted. The current image resolution is 1440x1082.

The stage is at the position [100;600] relatively to the origin point and the z is 120 steps higher than the FOCUS point.

2 ROI are defined:
- point A[150;450], stack starts at 20 and ends at 100.
- point B[0;600], stack starts at 20 and ends at 120.

The pictures will be named as:
protoplastes_A_20200822_1605_90
And be saved in /home/pi/Desktop/Experiments

Stacks will be made 3 times + at t=0 and at the end of the total time in 10min.
Z motor will make 10steps between each pictures for stacks.

The pictures are taken with brightfield illumination.