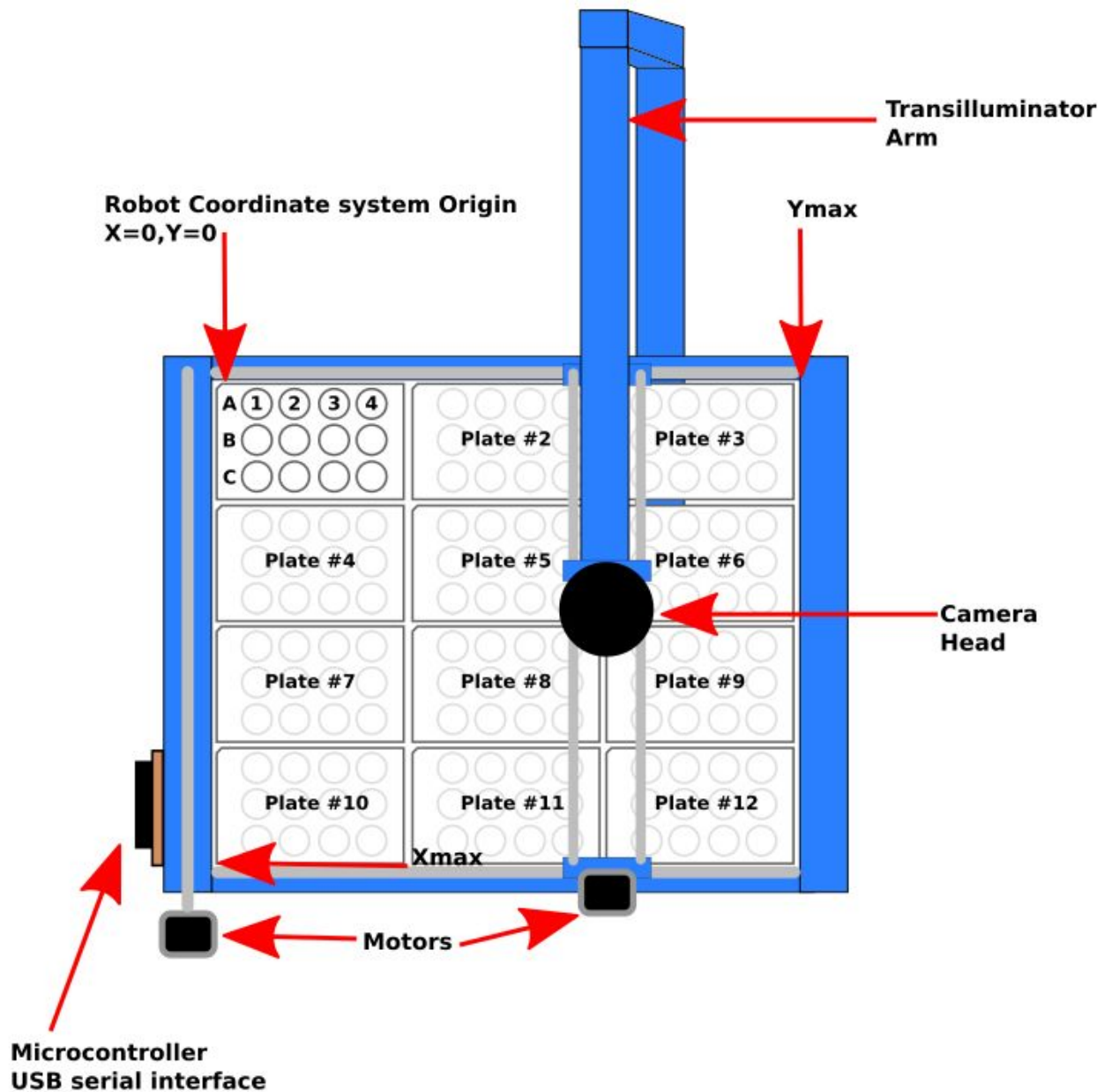# Starting/Stopping a WormBot experiment

1. Prepare the worms on a standard 12-well culture plate (this is covered in detail in a previous section/video)
2. Locate an empty slot(s) in the wormbot for your 12-well plate(s). The numbered plate locations for the WormBot are shown in the figure below:

3. Open Firefox or another web browser on the server attached to your Wormbot and go to the Wormbot scheduler at http://127.0.0.1/cgi-bin/scheduler   Note: You can get a static IP address or domain name for your WormBot so that you can access it from other locations. See the Security section for more details.

4. In the scheduler look at the list of available plate slots and select one from the drop down menu (labeled by red arrows below):
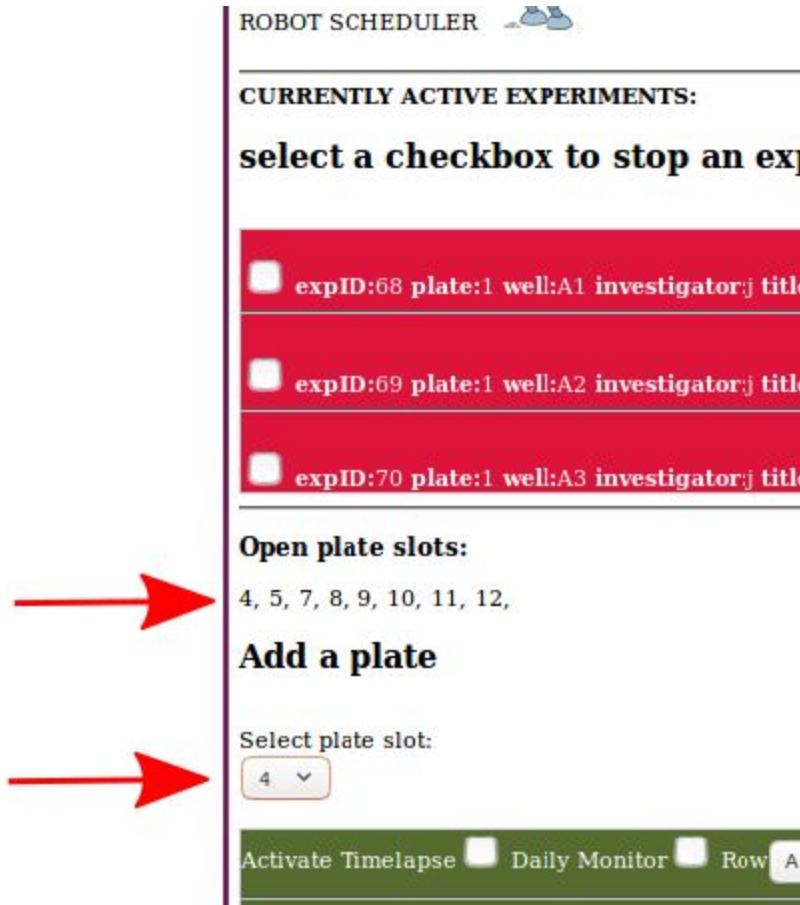
5. The green area of the scheduler is for inputting data about the experiments you are adding. There are 12 rows for the 12 wells in the plate (only one 12-well plate can be entered at a time). Note: If you do not wish to collect data for all 12-wells you can leave some of the rows blank and data will not be collected.

6. For each well there are 2 data collection modes available...both can be used simultaneously. If you select Activate Timelapse the WormBot will take an image of the well every 10 minutes until you stop the experiment. If you select Daily Monitor the WormBot will take a continuous video of the well (25 FPS) for 5 minutes once a day until you stop the experiment. Daily Monitor is useful for behavioral or other analyses that require frame rate faster than 1 frame every 10 minutes. While not necessary it is advisable to always Activate Timelapse data collection. Again, you may select both modes for a single well.
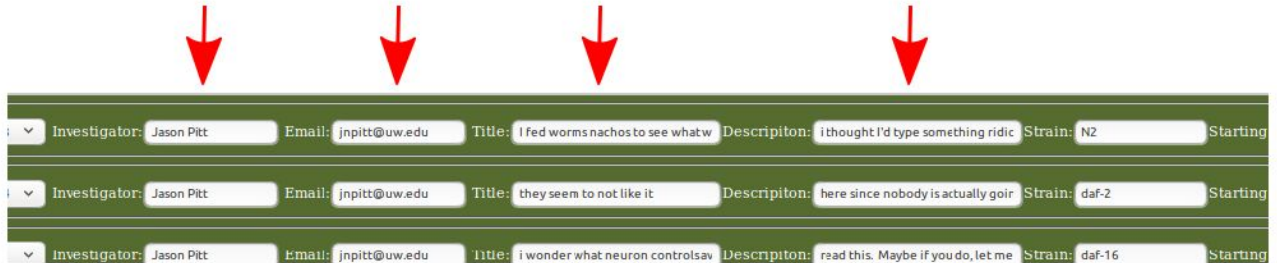

7. Enter the Row letter and well number for each Well/Experiment. Note: the Green input window must be scrolled with the mouse wheel or window scroll bar to access all 12 wells.

8. Enter the name of the investigator for each experiment and their email address and a title for the experiment and a description. As of the initial release the email field is not used however future releases of the Wormbot software will send experiment related emails to the address inputted here. Note: certain ASCII characters are disallowed in these fields and you may notice them replaced in the final data files.

9. Enter the starting N (number of worms placed into the well) and the age, in days, of the worms when the worms were placed on the Wormbot. Note: As mentioned previously the best target N is somewhere between 30-40 animals and we usually transfer animals at L4 to the WormBot plates containing FUDR, however if you don't want to use FUDR you can transfer older worms after they've run out of sperm.

10. Once you've filed out all the fields, double check that all the data (especially the well letters and numbers) are correct press the Update Robot button.

The experiments should now show up in the Red Currently active Experiments section of the Scheduler:

11. To actually place the 12-well plate on the robot you can now simply put the plate into the empty slot you selected. However sometimes if the robot is busy this can be challenging or dangerous. After you have updated the robot, at the end of the next scan cycle (up to ten minutes) the robot will enter Loading Mode and the camera head will travel to the Xmax,Ymax position for a minute to give you time to load the WormBot while it is not scanning.

12. To stop an experiment simply check the two boxes per experiment line in the red Currently Active Experiments section of the scheduler. Then press the Update Robot button. As with starting an experiment, after the completion of the next scan cycle the robot will enter into Loading Mode, and the camera head will travel to Xmax,Ymax for a minute to allow you to unload the plate from the robot. Note: You may stop individual wells on a plate and not others. Data will still be collected for experiments on that plate that have not been stopped. The plate slot will not become free to setup a new plate in the scheduler until all the wells in a plate have been stopped.

select a checkbox to stop an experiment

☑ **expID:**118 **plate:**4 **well:**A3 **investigator:**Jason P.tt **title:**I fed worms nachos to see what would happen i thought I'd type something ridiculous ANALYZE **VERIFY STOP** ☑

☑ **expID:**119 **plate:**4 **well:**A4 **investigator:**Jason P.tt **title:**they seem to not like it here since nobody is actually going ANALYZE **VERIFY STOP** ☑

☑ **expID:**120 **plate:**4 **well:**B1 **investigator:**Jason P.tt **title:**i wonder what neuron controls aver read this. Maybe if you doCOMMA let me know ANALYZE **VERIFY STOP** ☑

Open plate slots:

5, 7, 8, 9, 10, 11, 12,

Add a plate

Select plate slot:

[5 ▾]

Activate Timelapse ☐ Daily Monitor ☐ Row [A ▾] Well [1 ▾] Investigator: [   ] Email: [   ] Title: [   ] Descripiton: [   ]

Activate Timelapse ☐ Daily Monitor ☐ Row [A ▾] Well [1 ▾] Investigator: [   ] Email: [   ] Title: [   ] Descripiton: [   ]

Activate Timelapse ☐ Daily Monitor ☐ Row [A ▾] Well [1 ▾] Investigator: [   ] Email: [   ] Title: [   ] Descripiton: [   ]

[Update Robot] [clear form]