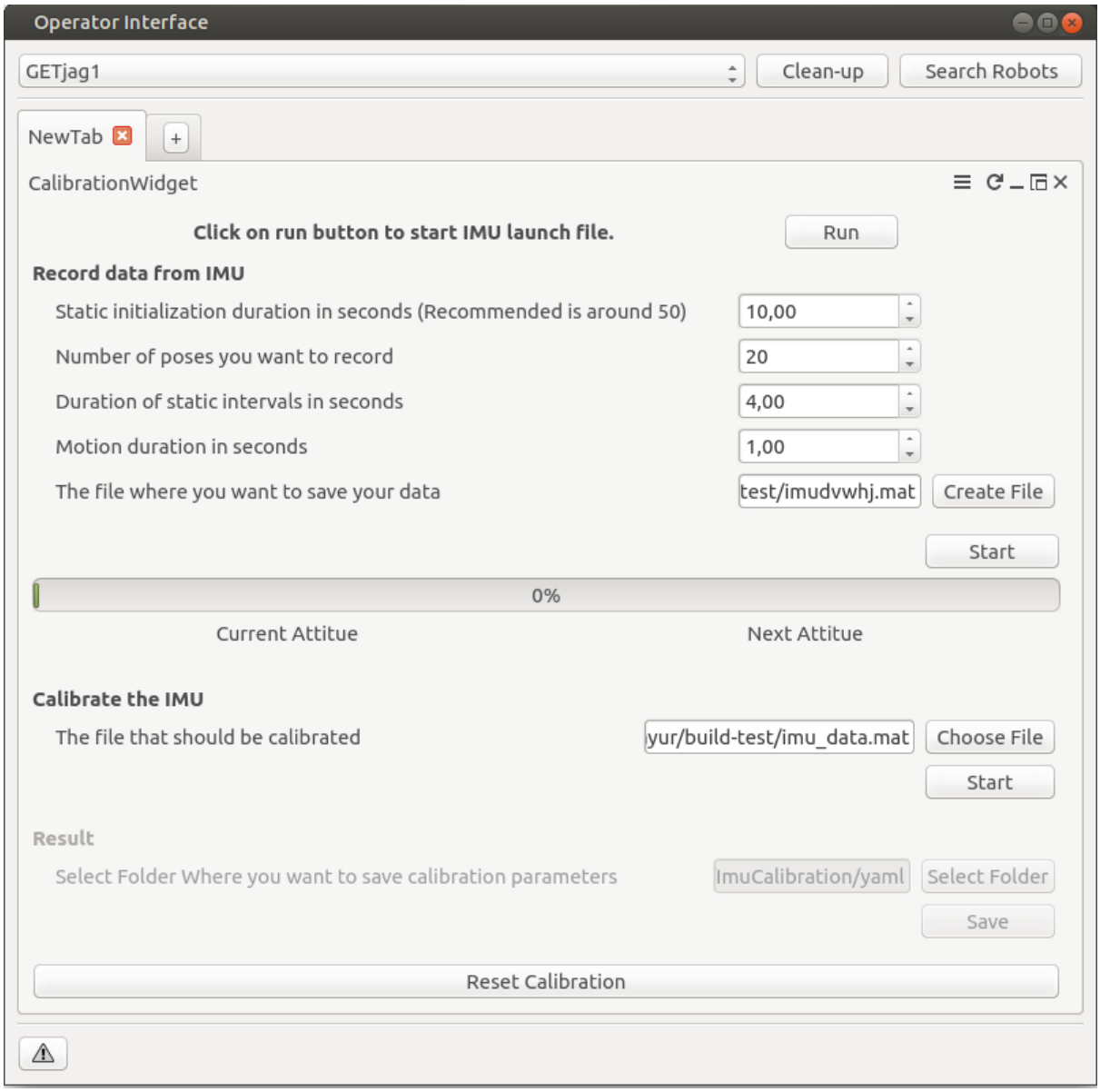
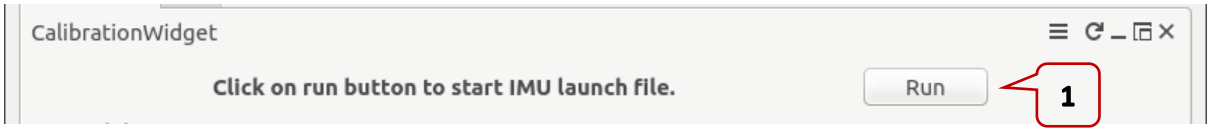
Instructions to use IMU calibration GUI:

➔ Insert the IMU launch file that reads data from hardware in the directory below:

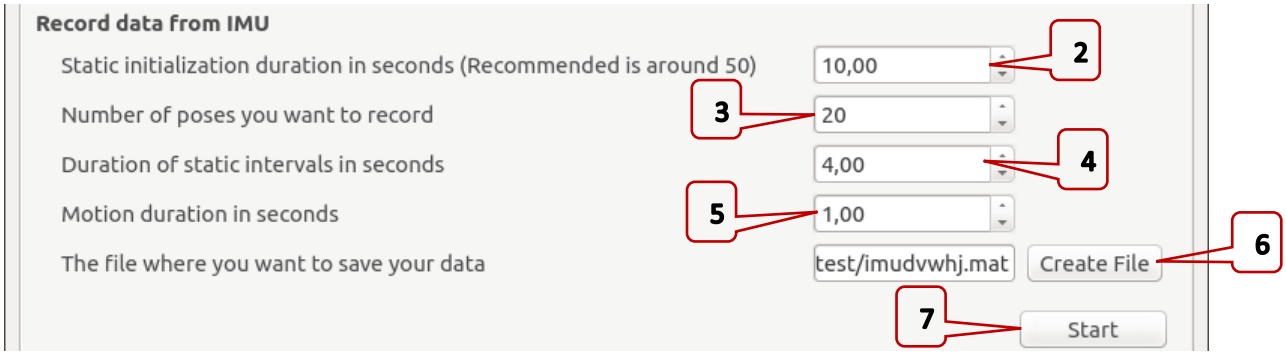
Imu_calibrater --> gui --> imu_launch_file

→ To start GUI: roslaunch imu_calibrater gui_test.launch

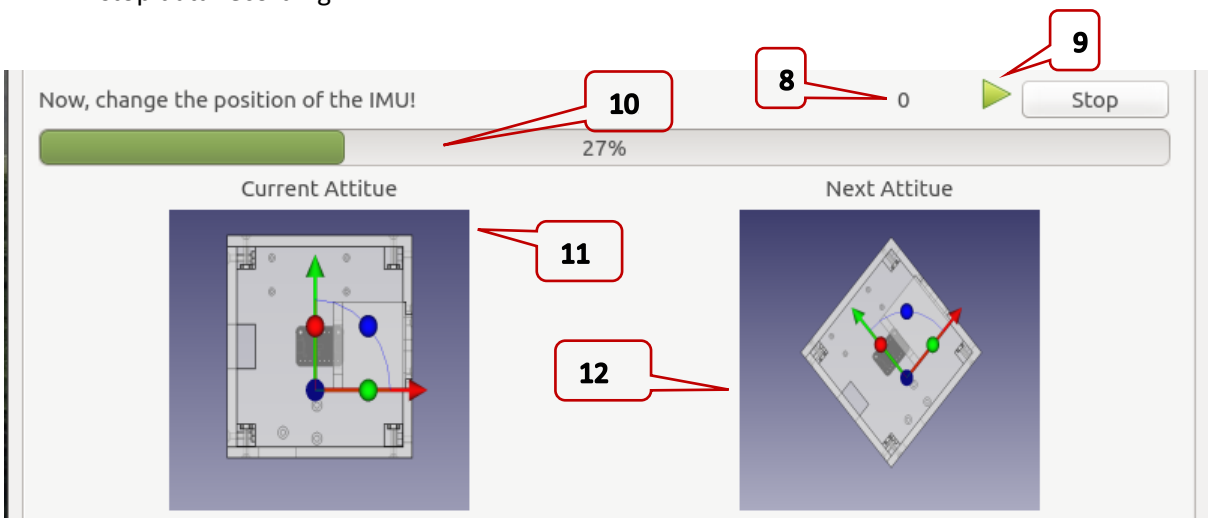




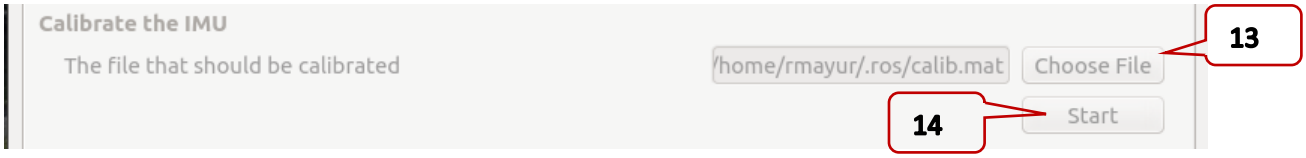
1. Execute the launch file located in the imu_launch_file directory.



2. Time for keep IMU steady (50 sec is recommended).
3. When recording data, there are a number of attitudes that IMUs should adopt. (The recommended number is 35 - 45).
4. After changing each attitude, the amount of time needed to keep IMU steady (10-13 sec is recommended).
5. Duration of the transition from IMU attitude 1 to attitude 2 (It should be 1 sec).
6. Create file with **". mat"** extension and save anywhere.
7. Data recording will begin after clicking start, and the button will change to stop if you want to stop data recording.

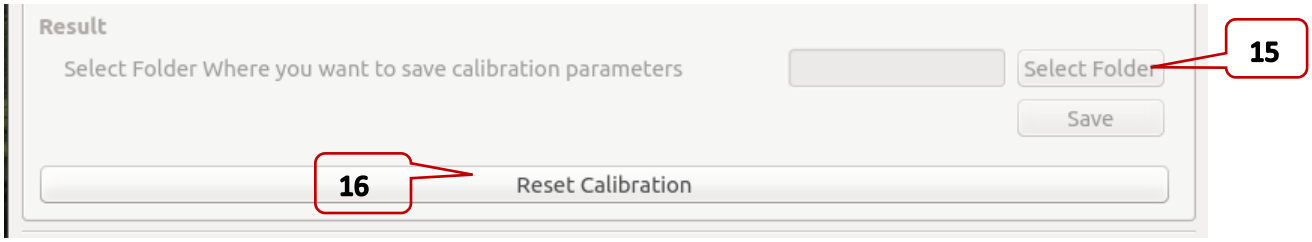


8. It will indicate how much time is left to change next attitude.
9. Indicates steady (green) and motion (red) of IMU.
10. Shows overall data recording timing.
11. Indicate current attitude in which IMU is.
12. Indicate the next attitude in which it should be.



13. Choose the file which contains recorded data.
14. When clicking on start data calibration will start in terminal.

NOTE: Once acceleration data calibration finish please press enter to start Gyroscope calibration in terminal.



15. Once calibration is done it will ask for save calibration parameter in ConfigurationParameter.yaml file and store that file in package imu_calibration --> config directory.

16. Reset button will reset whole calibration GUI to default setting.