AION

Installation Guide – Ver: 1.0.2

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Anaconda Distribution

This program was built using Anaconda3 (Python 3.6) and is dependent on the libraries provided with its instillation. If you need to install Anaconda3 the download can be found at this link: https://www.anaconda.com/download/

If you are installing Anaconda3, please tick the option “add anaconda to path”.

Terminology Clarification

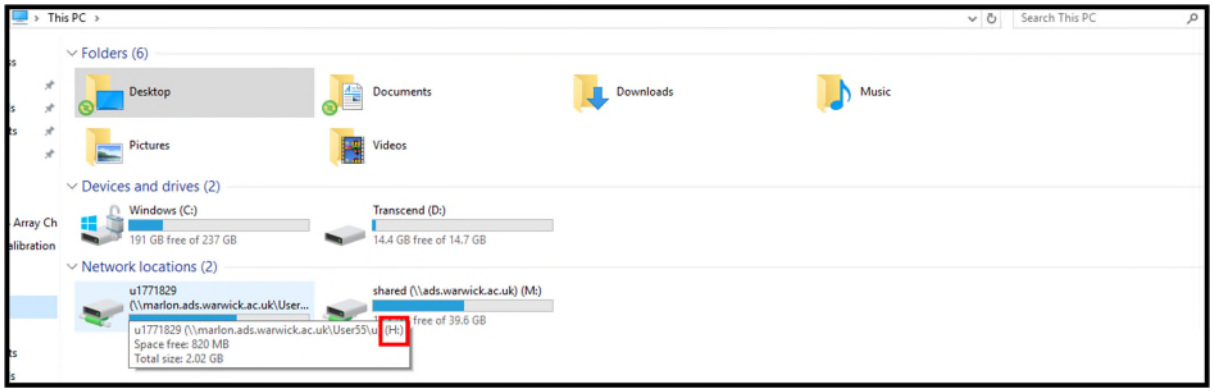
First, some clarification on nomenclature used for the rest of this documentation. The use of the tilde (~) symbol before a file path means any length of path before this. For example, “~\aion-master\aion” is the correct path for any of the following paths:

```
“H:\Desktop\aion-master\aion-master\aion”
“H:\Desktop\aion-master\aion-master\aion-master\aion”
“C:\Users\Harry\My Documents\aion-master\aion”
Etc.
```

Running aion.py

To run Aion run the ‘aion.py’ file. If you know how to run a python script from the command prompt (make sure it’s the Anaconda3 command prompt – with the correct PATH variable), great! Go do it. If you don’t it will be explained step by step here.

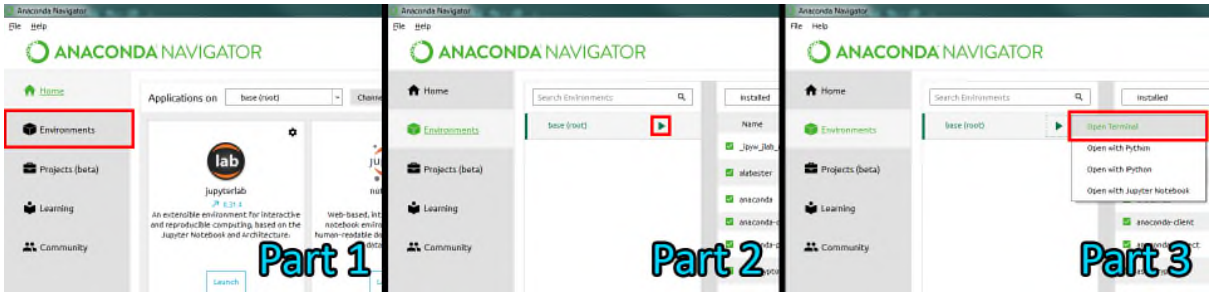
1. First locate the “~\aion-master\aion” folder, we’ll need this path later.
    a. In this instance it is located on the desktop, in the location “H:\Desktop\aion-master\aion-master\aion”. **N.B: Directory paths are case sensitive when using the command prompt.**
    b. The drive letter was found as shown in Walkthrough 1.



Walkthrough 1 – This shows you how to find the drive letter of the mounted network drive which holds the desktop.

2. Open the Anaconda Navigator.
    a. This can be done by selecting the start menu and searching for “anaconda navigator”.
3. Go into the Environments tab (Walkthrough 2 – Part 1).
4. Left click the button to the right of the “base (root)” option (Walkthrough 2 – Part 2).

5. Select “Open Terminal” (Walkthrough 2 – Part 3).



Walkthrough 2 – Left, step 3. Middle, step 4. Right, step 5.

6. In this terminal you need to navigate to the location of “~\aion-master\aion” (Walkthrough 3 – blue, red & green). If you know how to do this, please skip straight to step 7.
    a. First check if the drive letter is correct. In this instance it is not.
    b. To change the drive letter, type the required letter and then a colon (e.g “h:”), then hit enter.
    c. To change the location type “cd” then a space then the path we found earlier (without the drive letter) “Desktop\aion-master\aion-master\aion”.
7. Now to run Aion type “python aion.py” then hit enter (Walkthrough 3 – magenta).

Walkthrough 3 – Blue, step 6a. Red, step 6b. Green, step 6c. Magenta, step 7.

Testing the Aion

This folder "~\aion-master\testing" contains the files for calibration & unbuffered testing. It also contains folders with the expected output files. To run the test please see the outlined steps below.

Information for Running the Unbuffered Testing

1. Point the unbuffered path to ~\aion-master\testing\calibration (Figure 1 – blue)
2. Run the calibration calculation (Figure 1 – blue)
3. Check the expected output and the actual output conform with each other (Figure 1 – red).
   > Further checks can be made with the expected output located:
   ~\aion-master\testing\calibration_expected_output
4. Point the unbuffered path to ~\aion-master\testing\unbuffered (Figure 1 – green)
5. Run the unbuffered calculations (Figure 1 – green)
6. When prompted about the invalid dataset, select "yes". The data is invalid.
7. When prompted to select which data points to plot, plot: Average, 1 & 5
8. Compare the output, located in the unbuffered folder, to the expected output. The expected output is located ~\aion-master\testing\unbuffered_expected_output

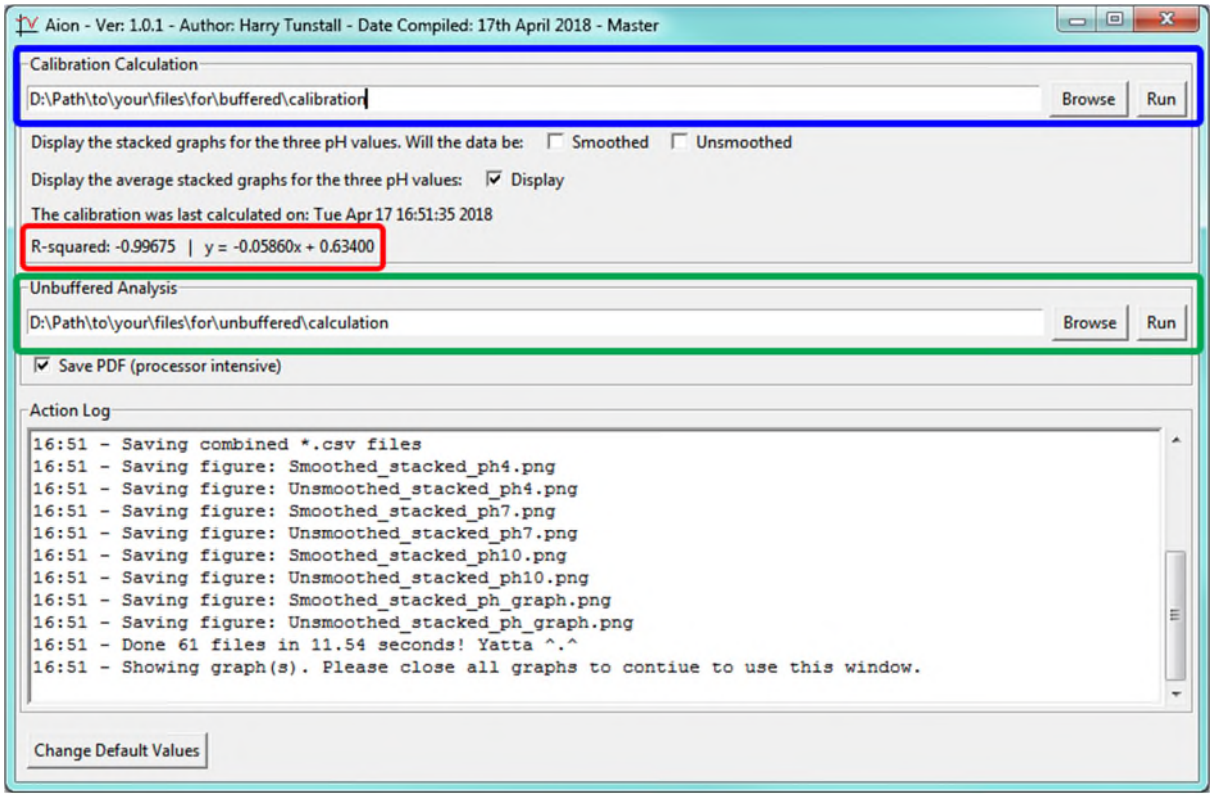


Figure 1 – Above is an annotated version of the master Aion GUI. Highlighted in blue is where the expected input is for calibration calculation is required, along with the associated run button. Highlighted in red is the expected output once Calibration has been completed. Please verify this is identical. Highlighted in green is the entry fields for unbuffered analysis.