PYOTE installation (MacOS only)

1 December 2018

If you are installing Anaconda3 and PYOTE for the first time, the following discussion is not relevant. Skip ahead to step 2 of the installation outline.

Recently, a new version of Python has been released as the Python 3.7 series.

PYOTE has been adapted to use this new version of Python. What this means to existing PYOTE users is that they will not be able to get/benefit from future updates to PYOTE as long as they continue to use Python 3.6. When they start using Python 3.7, updates will resume automatically.

There are already 2 updates to PYOTE available to Python 3.7 users:

1. A vertical splitter between the commands/plot section and the table/report section got lost during some update in the past; this gui feature has been restored.

2. An automatic generation of the files needed to enable a user to easily create a desktop icon for starting PYOTE has been added.

I have experimented with simply updating Python 3.6 to Python 3.7 in an existing installation. But the number of files that have to change is very large. In my opinion it is easier, safer, and more trouble-free to reinstall Anaconda3 with the latest Python version already included. These instructions are based on that belief.

Outline of installation:

1. If you have a previous Anaconda3 installation, uninstall it by deleting the folder:

   C:/Users/<your user name>/anaconda3

2. Install the Python 3.7 version of Anaconda from their website into the folder

   C:/Users/<your user name>/anaconda3

   This location is the default location (already filled in for you by the Anaconda3 installer). You must accept this default in order for the supplied Desktop icon for starting up PYOTE to work properly (i.e., be able to find PYOTE).

3. Install PYOTE from the Internet (requires opening the standard Mac command window and typing source activate to select the correct Anaconda3 environment).

4. Test the PYOTE installation from the window you opened in step 3. This both confirms that PYOTE is working on your machine and in addition writes a clickable icon to your Desktop that will be used to start up PYOTE in the future.

Installation: step-by-step in detail

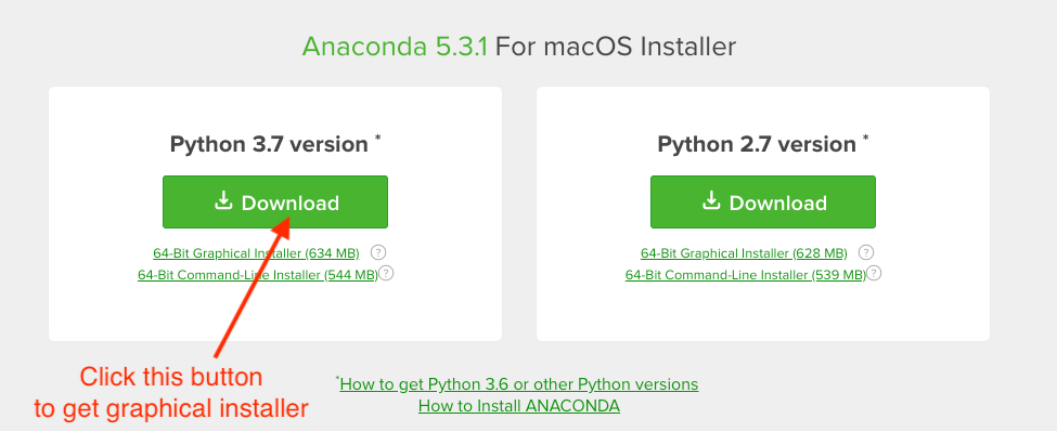
Step 1: Uninstall (if needed) the existing Anaconda installation. This is done by simply deleting the folder:

C:/Users/<your user name>/anaconda3

Step 2: Install Anaconda from Internet.

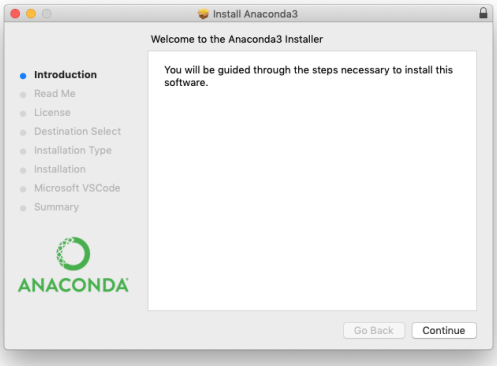
Go to **https://www.anaconda.com/download**

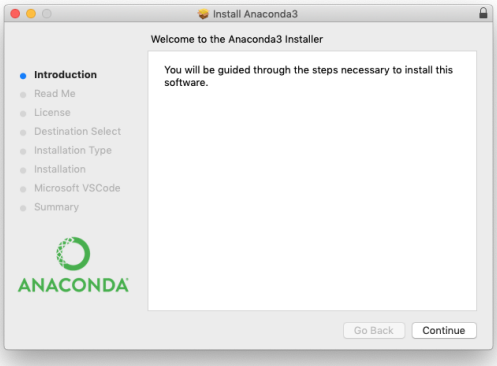
You will see a page that includes the following (you may have to scroll down to see it):

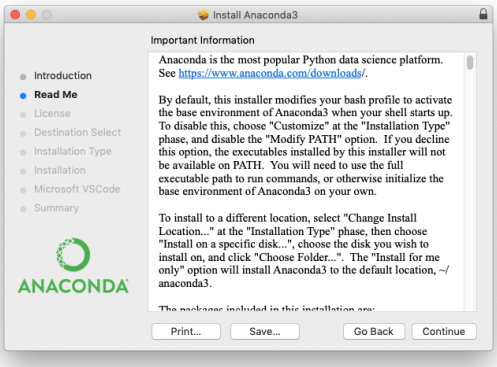


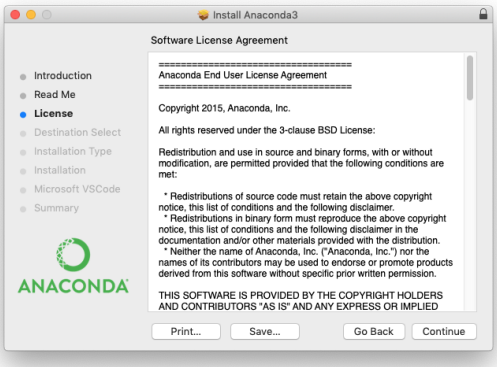
Click on the Python 3.7 version Download button. I recommend saving the downloaded .pkg file to a place of your choosing rather than choose the 'run' option of the download.

Follow the instructions, accepting all of the defaults and opting out of all 'offers'. Here is a screen-by-tedious-screen 'movie' of my install:

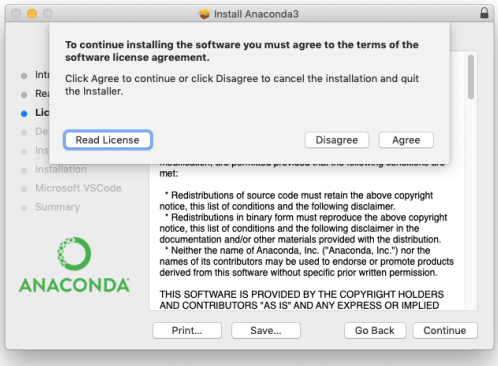


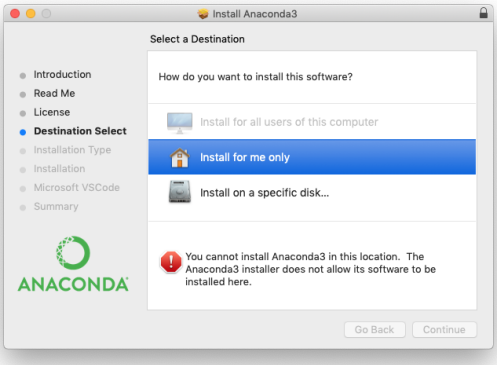




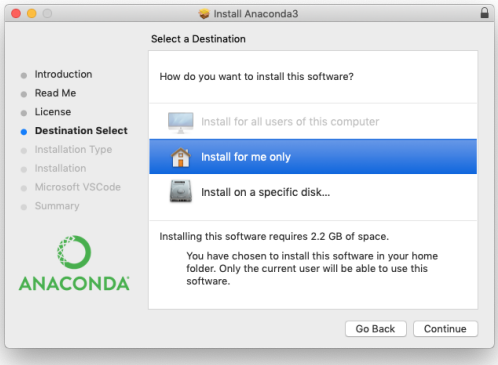


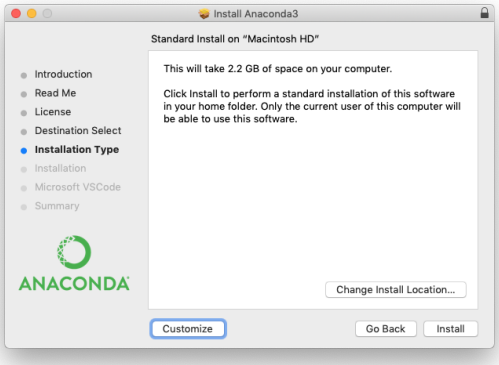
Notice in the left panel above that it explains what happens with the PATH variable and what your other options might be. We'll be accepting the default behavior which modifies your .bash_profile to update your PATH variable appropriately.

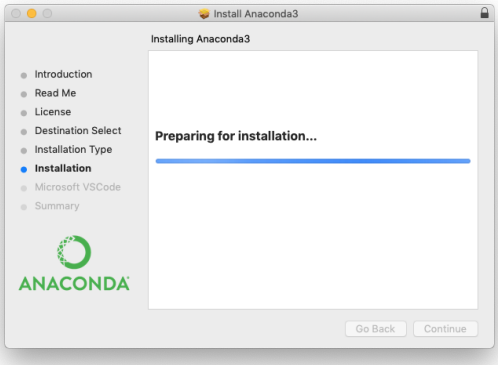


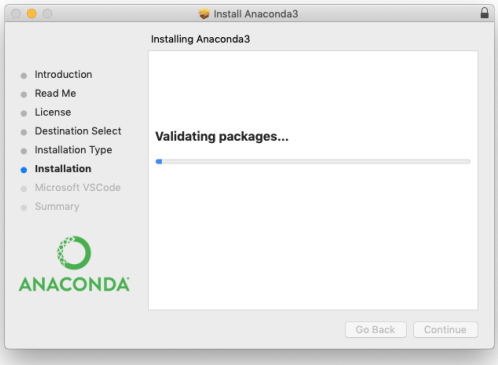


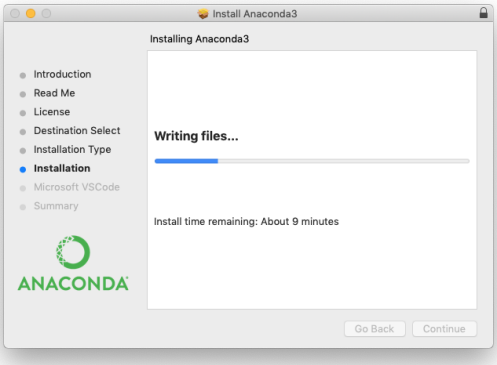
The right-hand panel above shows the only 'oddity' of the install. It would look as though an 'install for me only' is selected and an error message says 'you can't do that!'. This is not true. Simply click on the 'install for me only' button and the panel changes to:

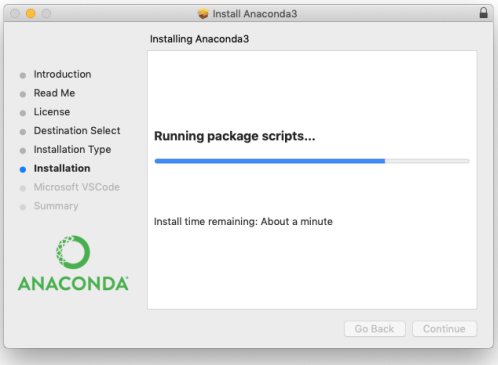

Install Anaconda3
Select a Destination
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
How do you want to install this software?
Install for all users of this computer
Install for me only
Install on a specific disk...
Installing this software requires 2.2 GB of space.
You have chosen to install this software in your home folder. Only the current user will be able to use this software.
ANACONDA
Go Back
Continue


Install Anaconda3
Standard Install on "Macintosh HD"
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
This will take 2.2 GB of space on your computer.
Click Install to perform a standard installation of this software in your home folder. Only the current user of this computer will be able to use this software.
Change Install Location...
ANACONDA
Customize
Go Back
Install

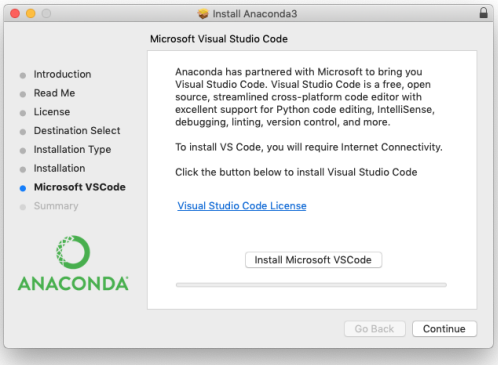

Install Anaconda3
Installing Anaconda3
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Preparing for installation...
ANACONDA
Go Back
Continue


Install Anaconda3
Installing Anaconda3
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Validating packages...
ANACONDA
Go Back
Continue

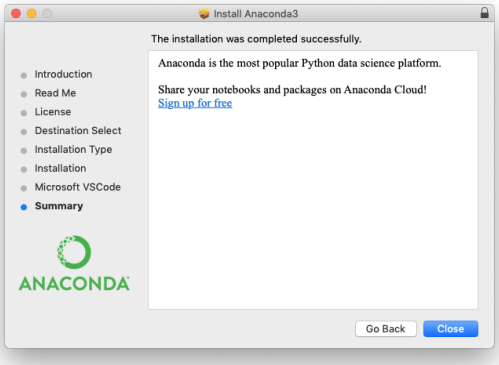

Install Anaconda3
Installing Anaconda3
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Writing files...
Install time remaining: About 9 minutes
ANACONDA
Go Back
Continue


Install Anaconda3
Installing Anaconda3
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Running package scripts...
Install time remaining: About a minute
ANACONDA
Go Back
Continue


Install Anaconda3
Installing Anaconda3
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Registering updated applications...
Install time remaining: About a minute
ANACONDA
Go Back
Continue


Install Anaconda3
Microsoft Visual Studio Code
Introduction
Read Me
License
Destination Select
Installation Type
Installation
Microsoft VSCode
Summary
Anaconda has partnered with Microsoft to bring you Visual Studio Code. Visual Studio Code is a free, open source, streamlined cross-platform code editor with excellent support for Python code editing, IntelliSense, debugging, linting, version control, and more.
To install VS Code, you will require Internet Connectivity.
Click the button below to install Visual Studio Code
Visual Studio Code License
Install Microsoft VSCode
ANACONDA
Go Back
Continue

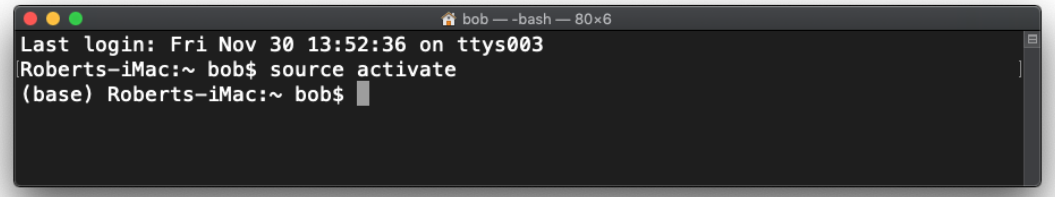
In the right-hand panel, you are being offered the opportunity to install VSCode. You don't need this, so don't install it. After clicking continue, the success screen appears (hopefully) !!



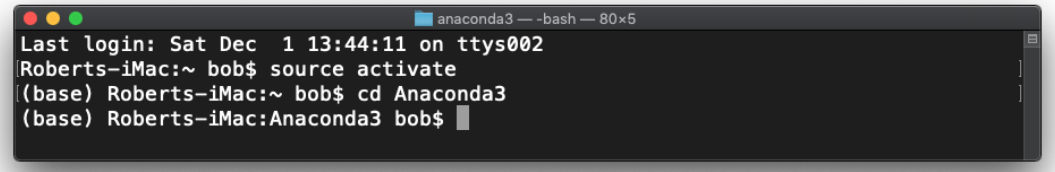
Step 3: Install PYOTE from the Internet (i.e., from the PyPI repository).Open the standard Mac command window.

At the $ prompt, execute:

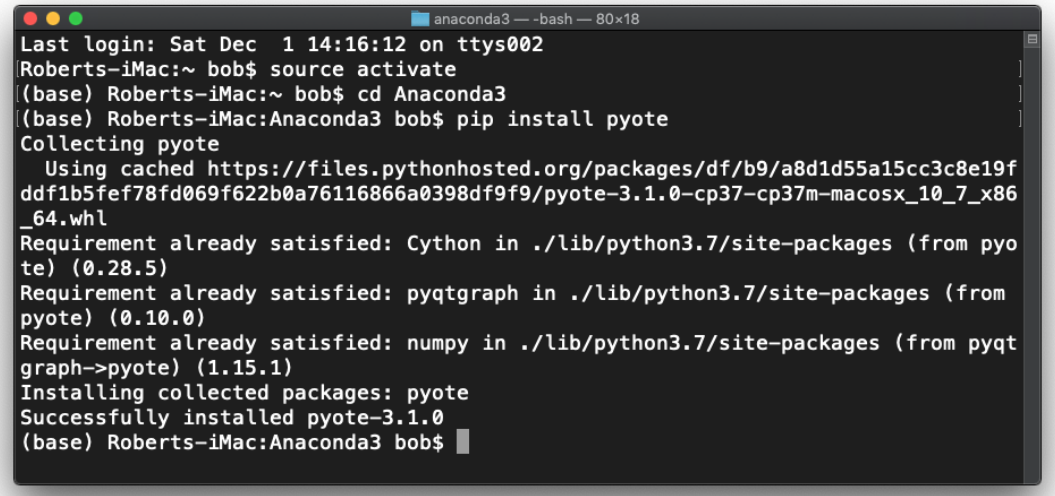
source activate



to activate the correct Anaconda environment. Then change to the anaconda3 directory (this is important so that 'sticky' settings such a window size and position get saved to the proper directory). You should see:



After the $ prompt appears, type **pip install pyote** as shown below (your screen may differ in the section before the prompt character), then press enter.



Note that there may/will be a few strange looking messages, but the line:

Successfully installed pyote-3.1.0

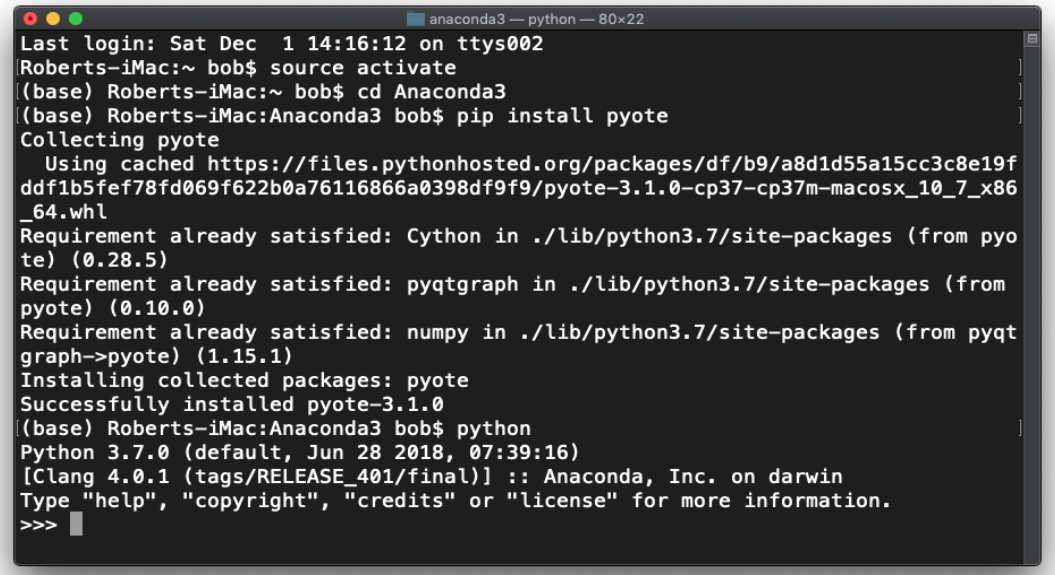
Tells us that the pyote install worked.

Step 4: Run and Test PYOTE installation.

Use the already open window.

At the $ prompt type: **python**

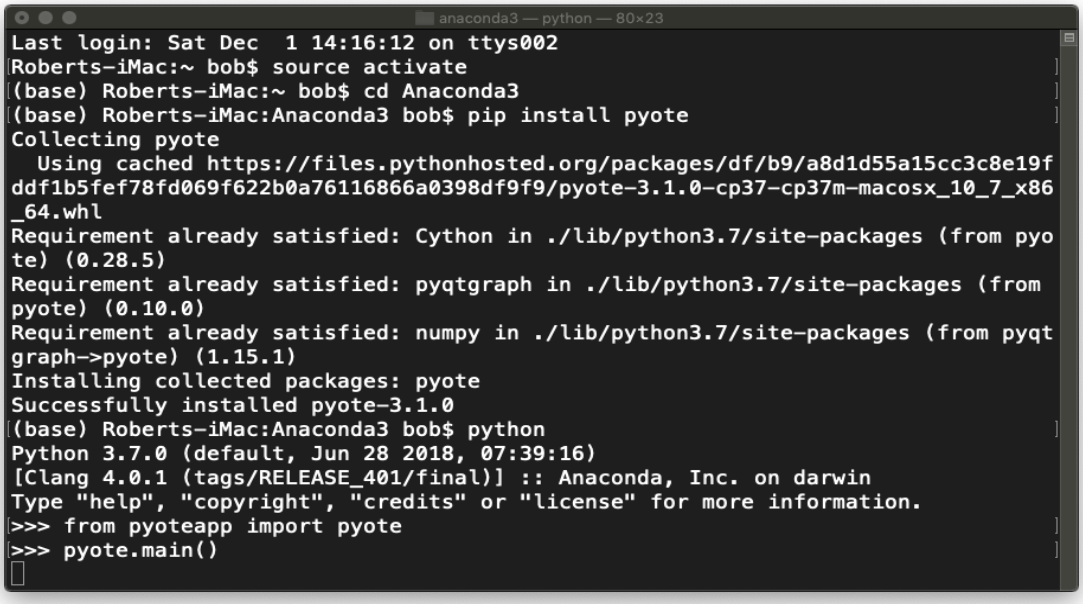
Now the window will appear similar to this:



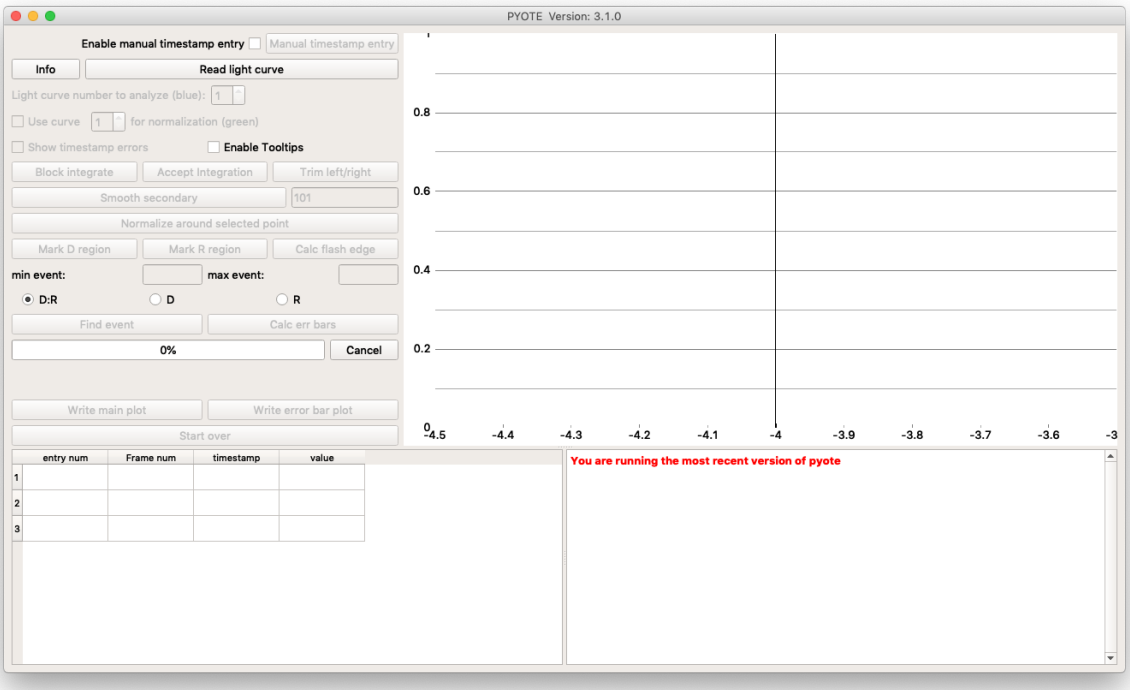
After you get the >>> prompt type: **from pyoteapp import pyote**

You will have to wait a while for this import to complete because python is busy compiling the source code into byte code. The resulting byte code is cached, so this is a one-time only delay.

After you get the >>> prompt back again type: **pyote.main() and see:**



The PYOTE application should appear as shown below (the latest version as of this writing is 3.1.0 as shown below):



The size and positioning of this first panel will need to be adjusted to your screen size. These settings will be saved in a file named simple-ote.ini in the anaconda3 directory (if you obeyed the instruction to change to that directory before making the initial run of PYOTE).

Note for future runs of PYOTE: If you are running the latest available version, the text in the PYOTE 'log' box at the bottom of the screen will read:

You are running the most recent version of pyote

If you don't have the most recent version, prior to PYOTE running, a prompt screen will appear asking you if you want to update to the new version. You can select 'Yes' or 'No'. If you select 'Yes', read the text in PYOTE 'log' box at the bottom of the screen and follow the instruction for restarting PYOTE.

A by-product of running PYOTE is the installation of a clickable icon on the Desktop that will simplify running PYOTE going forward. It looks like this on my Desktop:

Double-clicking that icon will now start up PYOTE.

Congratulations, you have now installed PYOTE. User instructions are provided in text boxes that appear when you 'hover' the cursor over a menu selection. Note that menu items only become active when certain previous operations have been done. Not much is active until a .csv file for an occultation event has been opened. In general, hover your cursor over active (or inactive) menu items and read each menu selection text box carefully before executing any menu items. Once you have read all the text boxes, go ahead and proceed with your analysis of the .csv file light curve.

The help boxes that popup will quickly become an annoyance. You can disable that feature --- look for the checkbox that does this and click it. Its state is 'sticky' (retained between program runs).