

Instructions for using MC-ICP-MS programs with Python

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Programs for reducing data from MC-ICP-MS can be run by downloading a Python interpreter onto either Mac or PC systems. For PC systems, this seems to be the preferred method. The following steps will take you through what to download and how to prime your system for running the programs. These steps will only have to be done once.

1. Go to <https://www.continuum.io/downloads> to download Anaconda, an open source distribution of Python. Download the **Python 2.7** package for your operating system (Anaconda2).
2. Install either the graphical installer or command-line installer and follow instructions to complete installation of Anaconda2.
3. Download Git from <https://www.atlassian.com/git/tutorials/install-git>. Follow instructions for your operating system
4. To download Python programs from GitHub, click on green icon “Clone or download”. Copy url address listed.
5. Open terminal or command prompt on operating system. Specify location you would like files downloaded to if you would like them somewhere other than your home directory.
6. Type “git clone https://github.com/junissen/Isotope_Lab_Programs.git” and press enter. Your operating system will download the repository onto your home directory or specified location.

7. You should now be able to run the programs. You can either run them through a text-editor program like TextWrangler or Spyder, or directly run them through your terminal or command prompt.
- In your terminal window or command prompt, go to the directory housing your Python programs. If you have housed your Isotope_Lab_Programs cloned folder in your home directory, simply type “cd Isotope.Lab.Programs”
 - Type “ipython ” followed by the .py file to run and program will start up. You may have to wait a minute or two for GUI window to pop up. The figure below provides an illustration of these steps.

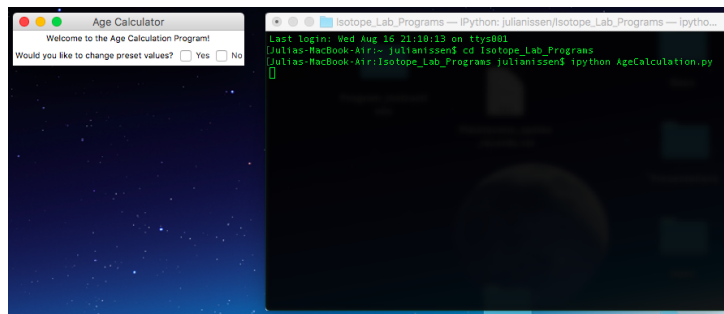


Figure 1: Example of running Age Calculation program using terminal window in Mac system

If you get the following error while trying to complete the last step:

- “ipython” is not recognized as an internal or external command, operable program or batch file

First make sure that the program is set to run on python:

- Right click on program icon and choose to open with python, which should be located under the Anaconda2 folder in your home directory

Then either double click on program icon to run or run in command prompt window by again going to Isotope_Lab_Programs and simply entering the name of the file you want to run, i.e. AgeCalculation.py

Be sure to keep your program folder up to date with the master GitHub repository, as programs may be amended or updated periodically. To do this, locate your repository folder in your terminal/command prompt window, using “cd Isotope_Lab_Programs”. Use the command “git pull” and any changes made to the GitHub repository will be uploaded into your folder. This will also keep any new files you may have added to your personal folder, without changing the GitHub repository.