Tips for setting up RADMC-3D and radmc3dPy on MacOS (or Linux)
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Install radmc3dPy (Python wrapper to run RADMC3D)

- Download latest version from https://www.ast.cam.ac.uk/~juhasz/radmc3dPyDoc/download.html
- Go to download directory (in my case ~/Documents/) and run the following
- `>tar -xzvf radmc3dPy-0.30.2.tar.gz`
- `>python setup.py install`
- If you do not have user permissions, run
- `>python setup.py install --user`
- So that it will be installed for your user only.
- Additional options for installation are given on the webpage under ‘Installation’.

Install RADMC3D

- Download latest version from http://www.ita.uni-heidelberg.de/~dullemond/software/radmc-3d/download.html
- Go to download directory (in my case ~/Documents/) and run the following
- `> unzip radmc-3d_v0.41_16.03.17.zip`
- `> cd radmc-3d/version_0.41`
- `> cd src/`
- `> make`
- If you have problems at this point, it is most likely by not having gfortran installed. You can test this by typing:
    - `> which gfortran`
- If nothing is returned, install gfortran as follows:
    - Install Xcode development tools (through Appstore)
    - Install Homebrew:
        - `>/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"`
    - Install gcc
        - `> brew install gcc`
        - `> brew link gcc`
        - The last step may run into issues if you don’t have the user permissions to /usr/local/lib. In that case, run:
        - `> sudo chown -R $USER /usr/local/lib /usr/local/include /usr/local/bin /usr/local/Cellar`
        - And run again
        - `> brew link gcc`
- `>make install`
- The last step creates a link ~/bin/radmc3d to the full path of the radmc3d software so that you can start radmc3d from any location without typing the full path. However, the latter may not always work. You can try the following, depending on the shell you are using (bash or tcsh). If you don’t know your shell, type:

- `> echo $SHELL`
- It is possible that your python runs in a different shell. Since we will run RADMC3D using python (radmc3dPy) this is actually more relevant. To find out, start python and type:
- `> import os`
- `> os.system(‘echo $SHELL’)`
- Note that the os.system command is basically running a terminal command as if you’re outside of python.
- Now set up your shell script.
- In case of bash, this is ~/.bashrc (it may not exist yet, in that case it is created)
    - `> emacs ~/.bashrc` or any other editor, and add the following line
    - `> export PATH=$PATH:~/bin`
    - Save the .bashrc file. This adds the location of the link radmc3d to the PATH, which is the list of locations where your terminal searches for commands and program names.
    - If this doesn’t work, you can also add an alias by adding the following line:
    - `> alias radmc3d = ‘~/Documents/radmc-3d/version_0.41/src/radmc3d’`
    - This sets the alias radmc3d to the actual location where radmc3d is installed. Note that it doesn’t matter if both lines are added to the bashrc file.
- In case of tcsh, this is ~/.tcshrc (it may not exist yet, in that case it is created)
    - `> emacs ~/.tcshrc` or any other editor, and add the following line
    - `> set path=($path:~/bin)`
    - Save the .tcshrc file. This adds the location of the link radmc3d to the PATH, which is the list of locations where your terminal searches for commands and program names.
    - If this doesn’t work, you can also add an alias by adding the following line:
    - `> alias radmc3d ‘~/Documents/radmc-3d/version_0.41/src/radmc3d’`
    - This sets the alias radmc3d to the actual location where radmc3d is installed. Note that it doesn’t matter if both lines are added to the tcshrc file.
- Now you want to test if the shell script is actually working. In principle it should be run automatically whenever you open a new terminal window. You can test if it has run by typing one of these:
    - `> echo $PATH`
    - This should display all directories in your path, including ~/bin
    - `> alias`
    - This should display all aliases that have been set.
- If your new additions are not shown, the bashrc (or tcshrc) file have not been run automatically. You can do it manually by typing
    - `> source ~/.bashrc`
- Note that you have to redo this every time you start a new session (open a new terminal)!