

Observational Techniques in Astrophysics - Installation details

This document contains details about how to install the tools needed for the class "Observational Techniques in Astrophysics". For each tool, a lengthier and more complete installation guide is generally available on the correspondent website.

Note: make sure that you are working on a `bash` terminal (recommended). Moreover, many of the files are large and will take a while to download. To complete the entire setup you should be on a good internet connection and allow at least a couple of hours.

For any question please write me an email (lia.sartori@phys.ethz.ch) or stop by my office (HIT J 33.2). I'll be happy to help.

1. XCode : command line tools

<https://developer.apple.com/xcode/>

```
> xcode-select --install
> sudo xcodebuild --license
```

Note: you need to agree to the license.

2. MacPorts : general package installer

<http://www.macports.org/install.php>

```
> sudo port -v selfupdate
```

3. Ureka : Python, IRAF & PyRAF

<http://ssb.stsci.edu/ureka/>

```
> sh install_ureka_1.4.1
> ur_setup
```

Note: if you want Ureka to be opened as default you should modify the path in the `.profile` file as follow:

```
ur_setup(){
    eval'path-to-home-directory/.ureka/ur_setup -sh $*' &> /dev/null
}
ur_forget(){
    eval'path-to-home-directory/.ureka/ur_forget -sh $*' &> /dev/null
}
ur_setup &> /dev/null
```

4. GALFIT

<http://users.obs.carnegiescience.edu/peng/work/galfit/galfit.html>

add path to .profile file:

```
alias galfit="path-to-installed-galfit/galfit"
```

5. SExtractor (Source Extractor)

from macports

```
> sudo port install sextractor @2.19.5
```

6. TOPCAT

<http://www.star.bris.ac.uk/~mbt/topcat/>

add path to .profile file:

```
top_path=path-to-installed-topcat/topcat-full.jar
export top_pat
alias topcat='java -jar -Xmx2048M $top_path'
```

7. HEASoft

<http://heasarc.nasa.gov/lheasoft/download.html>

Note: install from source code distribution. Download all the packages and follow the HEASoft installation guide

```
> cd heasoft-6.16/BUILD_DIR/
> export FC=/opt/local/bin/gfortran-mp-4.7
> ./configure > config.out 2>&1 &
> make > build.log 2>&1 &
> make install > install.log 2>&1 &
```

add path to .profile file:

```
export HEADAS=path-to-installed-heasoft/heasoft-6.16/(PLATFORM)
alias heainit=". $HEADAS/headas-init.sh"
```

8. CIAO (includes also SAOImage DS9)

<http://cxc.harvard.edu/ciao/download/>

```
> bash path-to-downloaded-ciao/ciao-install
```

add path to .profile file:

```
alias ciao="source path-to-installed-ciao/ciao-4.6/bin/ciao.bash"
```

9. GitHub

<https://github.com>

Note: If you register with an educational email you can get 5 free private repos