
ObservationTools Documentation

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IA

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A set of tools to plan astronomical observations.

CHAPTER 1

Installation

With git

If you have git installed (or if you want to install git and use it for the first time), then the tools can be installed with the following few commands in the terminal:

```
git clone https://github.com/iastro-pt/ObservationTools
cd ObservationTools
pip install -r requirements.txt # You may need to use sudo here
```

Without git

If you do not have git installed, you can just download the entire directory [here](#):

```
unzip ObservationTools-master.zip
cd ObservationTools-master
pip install -r requirements.txt # You may need to use sudo here
```

Updates

If you want to update your tools and installed it with *git*, simply change the directory to this folder and do a *git pull*. If you don't used git, you have to do the installation again as described above.

The script `visibility.py` is used to plot the observability of objects to aid the planning of astronomical observations. It is inspired by [STARALT](#) and [PyAstronomy's Transit Visibility](#) tools.

Modes

Currently there are two user modes of visibility. `staralt` (default) and `starobs`. The usage of these is outlined in the following sections.

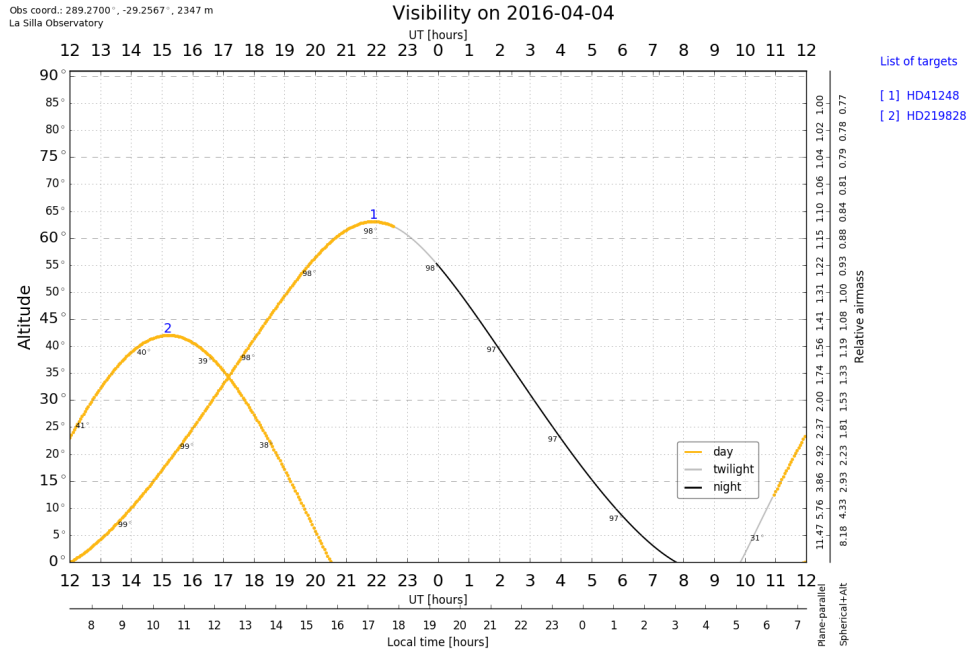
staralt

The `staralt` mode displays the altitude verse time of targets for a particular night.

For example:

```
python visibility.py HD41248,HD219828 -s esolasilla -d 2016-04-04
```

Results in the following image.



It is the default mode if no mode is specified. If the `-d`, or `--date` is not provided with the `YYYY-MM-DD` format is then it defaults to today/.

The `observatory` location can be specified using the `-s` or `--site` flag. The default observatory is ESO To find the list of available observatories and name codes run:

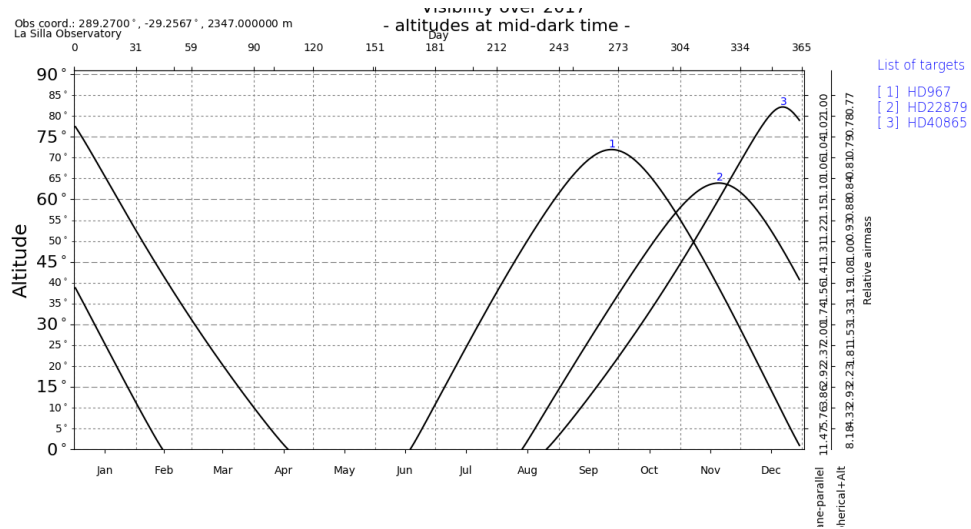
```
from __future__ import print_function, division
from PyAstronomy import pyasl
# List all available observatory data
pyasl.listObservatories()
```

starobs

The `starobs` mode shows how the altitude, at the *mid-dark time*, of each target changes over the course of the year. e.g.

```
python visibility.py HD967,HD22879,HD40865 -m starobs
```

Draft image



Only the year *YYYY* is to be specified for the `--date` flag in this mode.

Other options

coordinates

The `-c` flag can be used to just return the coordinates of the targets in STARALT format then exit.

CHAPTER 3

Radial Velocity

Coming soon...

CHAPTER 4

Contributors

The list of contributors to this project so far are

- [Daniel Andreasen](#)
- [João Faria](#)
- [Jason Neal](#)

People are more than welcome to do pull requests, open issues, give suggestions, etc. on the [github repo](#). Then your name could appear here also.

If you do not have a github user (or don't want to use github for some obscure reason), I can be contacted at daniel.andreasen@astro.up.pt.

CHAPTER 5

Indices and tables

- `genindex`
- `modindex`
- `search`