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## Download and Installing for local use

The Goodman DRP can be downloaded and run on machines running Unix-like Operating Systems (OS) like Ubuntu or Centos. All you need is to have Python and some libraries commonly used in astronomy. The pipeline should run also on MacOS systems, but it has not been fully tested yet on this OS. We expect it may also run in the latest versions of the Windows OS, but we have not tested this. Here is what you need to have installed to run the pipeline:

- python 3.5+ [1]
- <u>numpy</u> [2]
- <u>scipy</u> [3]
- matplotlib 2.1+ [4]
- <u>astropy 3.0+</u> [5]
- pandas 0.22+ [6]
- ccdproc [7] v1.3+ [7]

If you choose to install the Goodman DRP on your machine, we highly recommend the use of a **Python Virtual Environment**.



That will prevent any installation, update or upgrade, wreaking havoc with the Python installed in your Operational System, which may render your machine un-bootable, and require a full OS re-install.

If you really want to install the pipeline natively on your system, you should be prepared for the possible consequences. ;-)



Before you start installing all the packages, consider download and install <u>Anaconda, a manager for Python Virtual Environments</u> [8].

(We actually recommend Miniconda [9], since it is cleaner).

Please, refer to the <u>Goodman Data-Reduction Pipeline - User Manual</u> [10] for more details on creating the proper environment to install the package.

## **Download the Goodman DRP**

Dowload the latest release in the following link. Make sure that it has a green tag that says "Latest release".

• Latest Release [11] [12]

All the releases are considered stable versions, though they can still contain bugs. Please, download a released version instead of cloning the whole repository. The Goodman DRP is an ongoing work and several changes are made every day. If you clone the repository, you might end up having inconsistencies between different times that you run it.

## Installing the Goodman DRP

If you are using Anaconda, you can simply follow the instructions below. If you already have created an environment, you can skip the step 3.

1. Create a folder in your system, move the downloaded compressed files and decompress them.

```
$ mkdir <my_new_folder>
$ cd <my_new_folder>
$ mv <path_to_the_decompressed_files> ./
2. Decompress them.

$ tar xf goodman-v<version>.tar.gz
or

$ unzip goodman-v<version>.zip
```

\$ cd goodman-v<version>/

then enter to the decompressed folder:

- 3. Use Conda to create a new environment using a pre-set environment that comes within the compressed files within the file "environment.yml":
- \$ conda env create -f environment.yml
  - 4. Activate the environment now (and every time you want to use the pipeline):
- \$ source activate <virtual\_environment\_name>

If you created the environment using the file "environment.yml", the <virtual environment name> is

"goodman".

- 5. Test if your installation will be successful:
- \$ python setup.py test
  - 6. If no errors come up, install the pipeline:
- \$ python setup.py install

Now you are ready to **Run the Pipeline** [13].

**Source URL:** http://www.ctio.noirlab.edu/soar/content/download-and-installing-local-use

## Links

- [1] https://www.python.org/
- [2] http://www.numpy.org/
- [3] https://www.scipy.org/v
- [4] https://matplotlib.org/
- [5] http://www.astropy.org/
- [6] https://pandas.pydata.org/
- [7] https://ccdproc.readthedocs.io/en/latest/
- [8] https://conda.io/docs/user-guide/install/download.html
- [9] https://conda.io/miniconda.html
- [10] https://github.com/soar-telescope/goodman/blob/master/user manual v1.0.0.pdf
- [11] https://github.com/soar-telescope/goodman/releases/latest
- [12] https://github.com/soar-telescope/goodman/archive/v1.0b1.zip
- [13] http://www.ctio.noirlab.edu/soar/content/running-pipeline