

Unconference session 2: Grism data reduction

Demo 1 - HST aXe

If you don't have a version of anaconda installed locally, follow the instructions [here](#). Miniconda should be all you need, and provides the minimum install.

Next, create a new directory for the workshop materials (I'll use /workshop/location/ as the default)

```
$ mkdir /workshop/location
```

```
$ cd /workshop/location
```

There is an example dataset for WFC3 in this repository, use git to clone it to your local directory: https://github.com/npirzkal/aXe_WFC3_Cookbook

```
$ git clone https://github.com/npirzkal/aXe_WFC3_Cookbook
```

For this workshop, I've created a notebook in the hstaxe repository. You can navigate to the repository and download the single file through the github interface, or you can clone the hstaxe repository: <https://github.com/spacetelescope/hstaxe/>

```
$ git clone https://github.com/spacetelescope/hstaxe/
```

The notebook for this workshop is:

https://github.com/spacetelescope/hstaxe/tree/master/jupyter_notebooks/hstaxe_wfc3_mos_workshop.ipynb

Installing hstaxe

```
$ conda create --name hstaxe-demo python=3.7 jupyter hstaxe  
photutils=1.0  
$ conda activate hstaxe-demo
```

You should be ready to run this example notebook.
It can be started with

```
$ jupyter notebook hstaxe_wfc3_mos_workshop.ipynb
```

Demo 2 - Grizli

1) Create grizli-dev environment-

The easiest way to get grizli installed is to follow the instructions at <https://grizli.readthedocs.io/en/latest/grizli/install.html>

Grizli has several dependencies, installing the grizli-dev environment (outlined on the install page above) is the best way to take care of these dependencies.

Please make sure you have all the configuration files downloaded and set up your .bashrc file.

2) Download data and tutorial-

The data necessary to run the tutorial will be available on box in the unconference2_grism at [this link](#).

The notebook can be downloaded at https://github.com/Vince-ec/grizli_example

Demo 3 - JWST calibration pipeline in Wide Field Slitless mode

First, download the material (jwst_pipeline_mos_workshop.ipynb, inputs, outputs_saved) into your local directory where you will run the demo.

jwst_pipeline_mos_workshop.ipynb can be found here:

https://github.com/gnoir0t/stsci_mos_workshop

Inputs and outputs can be found in the unconference2_grism folder at [this link](#).

Set up a new conda environment (here called 'jwst') with python 3.8 as follow:

```
$ conda create -n jwst python=3.8
```

Then, activate the environment and install the jwst pipeline:

```
$ conda activate jwst
```

```
$ pip install jwst==1.1.0
```

Install 'jupyter' and 'pandas' in your new environment:

```
$ pip install jupyter
```

```
$ pip install pandas
```

The last step before opening the jupyter notebook demo, is to set up the CRDS cache so that reference files can be directly downloaded from the server when running the different pipeline steps:

```
$ export CRDS_PATH=$HOME/crds_cache
```

```
$ export CRDS_SERVER_URL=https://jwst-crds.stsci.edu
```

Then, the notebook can be opened with:

```
$ jupyter notebook jwst_pipeline_mos_workshop.ipynb
```

Before the workshop, make sure at the very least that you can successfully run the first cell in the notebook to verify that you can import all the necessary packages. Make the necessary installs if need be.

See also: <https://jwst-pipeline.readthedocs.io/en/latest/index.html>