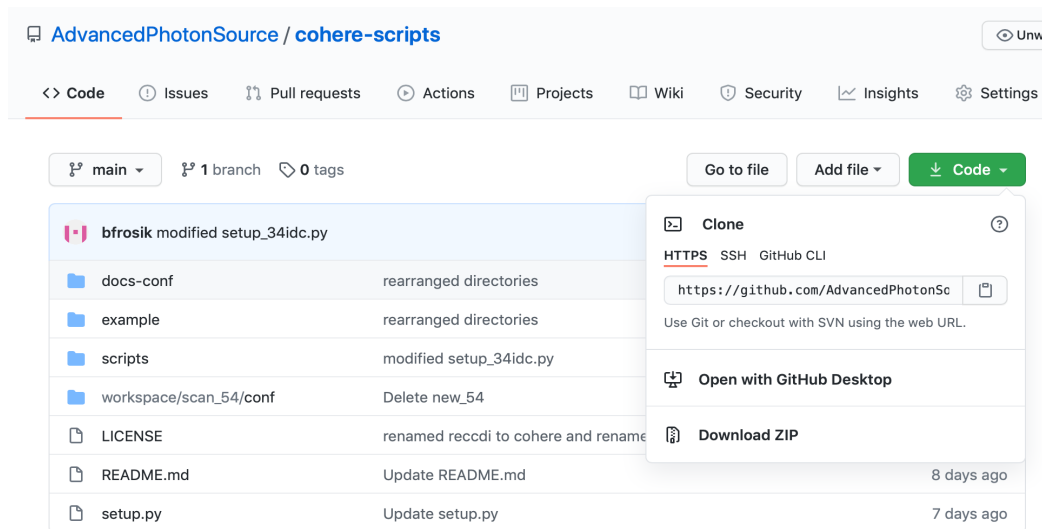# Installing user's scripts

Before using the cohere tools make sure that the installation is completed. If you already have an environment with the cohere package installed, activate that environment. Otherwise, refer to https://cohere.readthedocs.io/en/latest/installation.html for installation instructions.

The cohere-scripts package is a supplemental git repository that contains executable python scripts for every stage of the 34-ID-C CDI phase retrieval workflow starting with raw data processing to final images. A directory with sample configuration files for each stage, and a complete example including experimental data, and configuration files to phase the data is included. There are three ways to get the cohere-scripts package onto your local computer, or remote computer if you are working this way.

The cohere-scripts package can be downloaded as a zip file by visiting https://github.com/advancedPhotonSource/cohere-scripts and clicking the green "Code" button and selecting "Download ZIP" as shown below.

Alternatively, one can clone the repository using git. This will create the cohere-scripts-main directory containing all of the cohere-scripts content. It will also then have version control allowing you to keep track of changes as you practice running the programs, should you want to. (https://www.atlassian.com/git/tutorials/comparing-workflows).

```
git clone https://github.com/advancedPhotonSource/cohere-scripts cohere-
scripts-main
```

Another way to get the cohere-scripts package on your machine is with the wget command:

```
wget https://github.com/AdvancedPhotonSource/cohere-scripts/archive/main.zip
unzip main.zip
```

Once you download and unzip or clone the cohere-scripts repository, change directory to the cohere-scripts-main directory, run setup.py, and start using scripts. The setup.py script finds absolute path to the directories used in example configuration and prepends it. Depending on where you downloaded the package to, you may be able to simply follow the commands below, that shows how to start GUI.

```
cd cohere-scripts-main
python setup.py
python scripts/cdi_window.py
```

About cohere-scripts package

The cohere-scripts package contains the following:

1. The script directory with user's scripts.
2. The docs-conf directory with configuration files for every stage a CDI phase retrieval. The configuration files list all parameters and provide example settings. One can use these files as the basis for starting a new phase retrieval endeavor. Refer to https://cohere.readthedocs.io/en/latest/configuration.html for detailed description of the configuration parameters.
3. The example directory that contains raw experimental data captured, a whitefield correction image for the particular detector that was used (34idcTIM2), a darkfield file to remove bad pixels, and the spec file that captured the meta-data for the scan. All the files in example were recorded at the APS 34-ID-C beamline.
4. The workspace directory contains a folder (scan_54) for analysis of the example data. The scan_54 directory, which is called the experiment directory, contains all files used and created during analysis for this instance. It has conf directory with configuration files to use the experiment data in the example directory.