v1

ASTR 596

Fall 2023

Characterizing CCDs (50 points)

This assignment is due by November 3rd at noon. It will be handed in on Canvas but will also involve using Github and Jupyter Notebooks. We will start this assignment in the 2076 computer lab. The assignment name in Canvas is "*Characterizing CCDs*" and is in Module 6.

All commands that you need to type will be given in red. Anything written like this **<text>** implies that you need to write something unique to the situation in place of the <> statement.

I will be putting all file and directory names in blue to make it hopefully easier to see them

Read each step carefully in its entirely before attempting that step.

1. activate your *stenv* conda environment
2. install the ccdproc package using conda install -c astropy ccdproc
3. In a terminal change into the ~/ASTR596/Rudnick_repositories/ASTR596_F23 directory
4. In the terminal type git pull to get my version of the exercise, which will be installed into a directory called *Reductionproject*
5. On your GitHub account, make your own GitHub repository for this assignment. Call it *Reductionproject_student*
    - Make sure to put in a README file and include your name in the README file so that I know to whom the repository belongs should your username not be obvious.
6. Push the green "Code" button on your own repository page and copy the URL you see.
7. At the terminal change into the *~/ASTR596/My_respositories* directory and execute the following to make a copy of your new repository
    - git clone <your new repository address> (just copied from the github web page)
8. Copy the entire contents of my recently downloaded repository to your new repository by executing the following command: rsync -u -a -v ~/ASTR596/Rudnick_repositories/ASTR596_F23/Reductionproject/ ~/ASTR596/My_repositories/Reductionproject_**student**/
    - This command makes a copy of an entire directory (mine) and its contents to a new location, preserving the last modified date of all the original files.
    - This contains a Jupyter notebook and fits files. Some are called .fits and some .fit, since the MaximDL acquisition software for some reason doesn't include the final 's' in the image extension.
9. cd ~/ASTR596/My_repositories/Reductionproject_student
10. jupyter lab characterize_CCD_student.ipynb
11. Complete the exercise in the notebook. As you work your notebook should be automatically saved in the same location where it was originally stored. You can manually save by pushing the disk key in the upper left of the Jupyter window. Any time you finish a block of work, upload your activity back to the GitHub repository using the web interface and adding a comment about what you have changed. You do this by clicking on the "*Add File"* followed by the "*Upload file"* option. Make sure to enter a comment before you upload your file.

12. When you are done with the assignment, make sure to upload it one last time. I will grade the most recent version that is on GitHub.
13. Make sure to add me as a collaborator to your GitHub repository. Use **grudnick@ku.edu** as the address when adding me.
14. Submit the GitHub repository URL to the Canvas assignment.