Exploring Data Access

Python DeCal

April 1st, 2024

Your broad goal for this discussion is to manipulate the data and plot the full spectra recorded in the file in a readable, replicable manner.

Remember that the solutions will be up by the end of the week, so just try to work through the exercise, and try not to get frustrated. It is an incredibly important skill for you to be able to work through these barriers, so take it as an opportunity to practice that skill. There will be minimal guidance.

1 Instructions

1. Download the file titled `fits_file_disc.fits` from bCourses.

2. Try to open it without Python, discuss the error you get.

   (a) Don't over-complicate it, just consider what it means.

3. Make sure you know where it is downloaded in your computer, open up a Jupyter Notebook and start trying to access it. Your end goal is to create function(s) that can extract the data and plot it, however you want to structure it. Jupyter Notebooks will be really useful for this since you can edit things and test them easily.

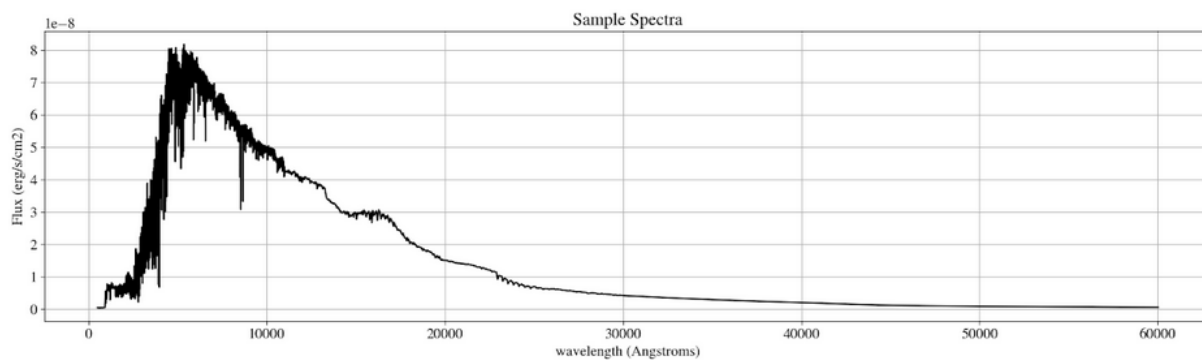   (a) Here is a link to the astropy documentation for accessing a FITS file.

Figure 1: This is how the plot will look, though you should customize it with your own aesthetic choices.