Not in a Folder

* FF.py --- the final python file ::: All the functions. Making the Table. All the filters. Filtering the Table. Setting up MCMC. Doing MCMC. Saving text files related to MCMC. Creating FITS files with the final mcmc coefficients. Plotting triangle plots and walker paths. Plotting the meshgrid and imshow. Misc things like saving information about the table to a text file, plotting the evolution of chi-squared by changing all the variables or just one variable. Lastly, the argparse with 25 optional arguments.
* FF.ipynb --- the final ipython notebook file ::: same exact thing as FF.py (but also includes a do_bin function) in a notebook version. Notebook version has commentary and descriptions.
* RandomFunc.py --- might be useful ::: Random functions that I made that aren't in the final file but might be of use. Can't run on its own, would need to copy and paste snippets into the main file.
* tableinfo.txt --- might be useful ::: Random text file with information on the sbc

OlderCode

* Binning.py --- Not useful but keep ::: This was very early on when I was trying to bin the observations using magnitude arrays; very primative version of creating a function to fit; there is a getfit function for x,y,z using np.linalg.lstsq
* BinningDict.py --- Not useful but keep ::: This is pretty much the same as Binning.py but instead of using arrays, it uses dictionaries (so it was a step up)
* EverythingTogether.py --- Not useful but keep ::: This was also early on where everything (reading in data, creating dictionaries, doing the fit on the delta magnitudes, and plotting) was put together. Dictionary version.
* EverythingTogeterTab.py --- Not useful but keep ::: This is pretty much the same as EverythingTogether.py but instead of using dictionaries, Astropy Tables are introduced. Introduction to two chips and fitting two chips is also introduced. Table version.
* DataInfo.py --- Useful/not useful ::: This was the beginnings of doing the filtering and creating dictionaries from the data. Well written code so nice to look at but probably not useful
* DataInfoTab.py --- Useful-ish ::: This is the most up to date of the table filtering functions. Useful for the code that imports it as a module but the final code does not import the file and just includes the filtering functions within it.
* FluxFittingScipy.py --- Could be useful as future reference ::: This is the Scipy verison of Flux Fitting. It uses scipy.optimize.leastsq() and involves two chips. Has the code for stars2consid (aka the stars that are considered for doing a fit to a certain chip). Also has the set up for op.leastsq() if I ever need it in the future. Currently takes in data with magnitude, not going to update that since low priority; and imports from DataInfoTab which may cause problems since DataInfoTab was updated - if I need to change it in the future I will.
* FluxFitting.py --- Was useful but probably not anymore ::: The original Flux Fitting whichs uses lmfit. Lmfit was a complete fail, but the structure of the code might be helpful - it was the backbone for the other Flux Fitting codes.
* FluxFittingOneChip.py --- Could be useful ::: This is probably the best and most advanced Flux Fitting code before doing MCMC. Became more 'automatic' where all the constants are at the top. Involves all the different types of functions (poly, cheb, leg). Reads in data to a Table and

then filters it - imports DataInfoTab but it is updated and correlates with DataInfoTab's functions. Still has the get fit function since we were trying out using those coefficients as initial coefficients for the op.leastsq(). Uses the scipy optimizer. Has some set up for MCMC but it didn't really work. Introduces integration and scale2one. More complex plotting. More misc. Options like applying the final fit, plotting the locations of the observations on the detector, and such. So in my opinion, I think this was the most advanced but we extracted the good parts of it and put it into the final code.
* FluxFittingMCMC.py --- Useful-ish ::: This is basically the non-argparse version of the final code. Like FluxFittingOneChip.py but now involves MCMC. Sampler uses sampler.run_mcmc whereas the final code uses iterations of sampler.sample which is the same thing (as far as I can tell) just in different forms. Constants are all at the beginning. All the functions (poly, cheb, leg) are included. Reading in data (given with magnitude and not flux) to a Table and then filtering it -- also imports updated version of DataInfoTab. Introduces saving the data such as mcmc coeff to a text file as well as the walker path and triangle figures. Lots of repeats of the misc. Functions. Not as updated as the FF.py file but maybe I will update it so they are the same.

TestingCode
* polyfit2d.py --- Not useful but keep ::: This was the early beginnings of figuring out how to do the fit for a 2d polynomial
* sigmaclipping.py --- Useful ::: This is the code for the sigmaclipping function. Based on Scipy's sigmaclip but updated with my own altercations of it for what we needed from it. Good file for testing sigmaclip since there are examples
* TestingParameters.py --- Not useful but keep ::: This was testing the Parameter class from lmfit and lmfit was a fail to use so this code is probably completely useless but keep just in case want to look over lmfit in the future
* multiprocess.py --- Useful ::: This is the code Dave gave me for trying out multiprocessing. The beginning of it is what Dave gave me. Useful since it has the structure of how to set up multiprocessing/

BeforeMCMCResults
* Might be just junk but keeping it because why not. But not useful.
BeforeMCMCResults/f606w_phot_r5
* Random Results in this folder using f606w_phot_r5 as a data file -- two chips
* Not too useful since the plots were computed using a bad optimizer
* NumObsBin*.png ::: the number of observations per bin and there are * bins
* DelFluxBin*.png ::: the delta flux per bin in * bins
* each functional form folder has plots comparing the initial coefficients scaled to 1 versus not scaled to 1

BeforeMCMCResults/SBC
* Random Results in this folder using SBC data -- one chip
* Again not too useful since the plots were computed using Scipy optimizers

Data
* Includes all the datafiles that I was using

FinalPresentation
* Includes all the plots I needed for the final presentation -- names of files should be self explanatory.
* Final presentation: DkossakowskiFlatField
* Draft presentation: DKossakowskiPresentationDraft