PHY250 Homework 4
Due: May 22

Do a galaxy-galaxy lensing analysis of the data posted on the course website. There are two files: source.cat has a list of source galaxy positions (first two columns) and reduced shears (last two columns), and lens.cat has a list of deflector galaxy positions (first two columns) and L/L_* (last column). Assume that all sources are at one source redshift, all lenses are at one lens redshift, and that mass scales with light. Plot the reduced shear profile of an L* galaxy and fit a functional form to it. Is it consistent with SIS? Does it look like an NFW? Why or why not? (You can be qualitative rather than quantitative here.) Turn in your code and a shear profile plot with data and sketches of what SIS and NFW models look like.