

Figure 1: (left to right) ALMA observations of AU Mic, best fit model, and best fit model residuals

This summer we've been investigating the vertical and radial structure of AU Mic using MCMC methods. Most parameters are well behaved, but a few questions remain:

The posterior for inner radius exhibits severe bimodality, with one solution at ~ 8 au and another at ~ 20 au. A larger inner radius is slightly preferred. We will be implementing a gap to see how it affects this bimodality.

We are still investigating the spatial scales on which our data are sensitive. Models with both linear and constant scale height prescriptions prefer values for scale height that do not seem to be lower limits (see Figure 2). We are hoping to further probe the resolution limits of the data by fixing the scale factor at a low value (~ 0.003) to see if such a constraint requires a worse fit.

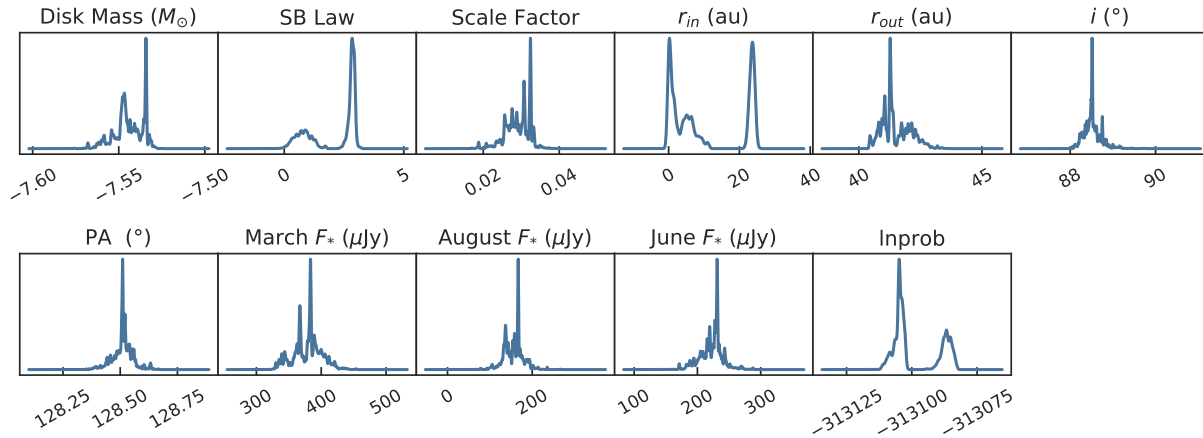


Figure 2: Posterior distribution of free parameters.