



Astronomy Program Opening Workshop August 22-26, 2016

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“Hierarchical Modeling of Exoplanet Populations”

The last few years have marked a substantial increase in the application of hierarchical models to populations of extrasolar planets. I will overview the science driving this hierarchical modeling, survey the numerical algorithms which are commonly used to evaluate these models, and outline the common elements of the hierarchical models themselves that are currently in the exoplanet literature. Building on this recent history, I will then identify future directions for hierarchical modeling of exoplanet populations, with particular attention to the challenges that will be encountered during this more advanced modeling. These challenges provide an excellent starting point for discussion and could guide the formation of ASTRO SAMSI working groups.