Exoplanetary System Architectures inferred from Kepler Systems of Multiple Transiting Planets

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Systems of multiple transiting planets offer some of the most information-rich insights into understanding planetary systems beyond the solar system. Observations of these systems reveal much about exoplanetary densities and architectures. Even after 10 years, the largest and most uniform sample of these systems is the Kepler Prime Mission with over 700 systems containing over 1700 planets. Due to the limitations of the transit method, understanding the true underlying densities and architectures of these systems requires detailed analysis. I will connect past work on underlying architectures to better understand the dynamical properties of these systems including both short-term orbital evolution and long-term dynamical stability. I will also report on progress in a project to determine the true underlying mass-radius-period distribution of Kepler planets using photodynamical modeling.