



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Characterizing the Distribution of Planetary Architectures with Kepler”

Abstract

For centuries, planet formation theories were fine tuned to explain the details of solar system. The diversity of planetary systems uncovered by Doppler surveys challenged previous theories and led to insights into planet formation, orbital migration and the excitation of orbital eccentricities and inclinations. NASA's Kepler mission has identified 450 systems with multiple transiting planet candidates, including nearly 1200 planet candidates and many potentially rocky planets. I will discuss how Kepler data can be used to characterize the distribution of planetary orbital properties and the architectures of planetary systems, including small and rocky planets.

Architectures refers to planet masses, orbits and their relationships among planets with a common host star which can serve as probes of the planet formation process. I will discuss early efforts to translate these observations into constraints on the formation and orbital evolution of planetary systems

Wednesday, September 24, 2014

3:30 p.m.

Bob Wright Centre

Room A104