



PHYSICS AND ASTRONOMY SEMINAR

Dr. Brendan Bowler

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“The Architecture of Planetary Systems Around the Most Common Stars”

Abstract

M dwarfs comprise about 75% of all stars and are probably the most common sites of planet formation. The population of planets orbiting low-mass stars at small separations has recently come into focus through radial velocity, transit, and microlensing surveys. I will describe new discoveries, statistical results, and overall implications of the Planets Around Low-Mass Stars (PALMS) survey, a high-contrast adaptive optics imaging program to explore the outer orbital architectures of M dwarf planetary systems. With a sample size of over 600 nearby young stars spanning about 30 nights at Keck Observatory and Subaru Telescope, PALMS is the largest direct imaging program in this stellar mass regime. Altogether, the synthesis of PALMS with results at smaller separations and around more massive stars is producing fundamental insights into the formation and overall architecture of planets orbiting the most common stars in our galaxy.

Friday, January 27, 2017

3:00 p.m.

Engineering Computer Science
Room 108