

Name: Jonathan Swift
Email: jswift@astro.caltech.edu
Institution: California Institute of Technology
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Abstract: Co-Authors: Philip Muirhead (Boston University), Alexandria Gonzales (Scripps College), Juliette Becker (Caltech), John Johnson (Harvard), Andrew Howard (University of Hawaii), Howard Isaacson (UC Berkeley)

Some of the most exciting exoplanet results to date have come from the smallest and coolest sample of stars in the Kepler field—the M dwarfs. However, the stellar properties of this sample are not well understood theoretically and are difficult to measure observationally. These uncertainties in stellar parameters directly limit our understanding of their planet populations. Detached, M dwarf eclipsing binary systems provide an accurate and precise, model-independent means of measuring the fundamental properties of low-mass stars. To date there have only been 2 M dwarf/M dwarf (M+M) systems characterized with periods longer than 5 days. We have begun a program to fully characterize 29 M+M eclipsing binaries in the Kepler field. We will present results from Kepler light curve modeling supplemented with Keck/HIRES radial velocity measurements, Palomar/TripleSpec near infrared spectra, and Keck/NIRC2 adaptive optics imaging for a subset of our sample with periods longer than 5 days, and highlight the theoretical implications for our understanding of the Galaxy's most numerous stars and the planets that orbit them.